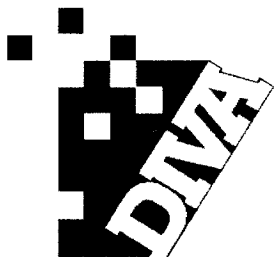


AF3.0HD

Monitor Service Guide



DIVA Laboratories, Ltd.

鈺緯科技開發股份有限公司

7F-8, NO. 351, SEC. 2, CHUNG SHAN RD., CHUNG HO, TAIPEI
HSIEN, TAIWAN, R.O.C.

台北縣中和市中山路二段 351 號 7 樓之 8

TEL : 886-2-2268631 FAX : 886-2-2262423

Table of Contents

| | | | |
|--|-----------|---|-----------|
| A. Features..... | 1 | G. Trouble Shooting Guide..... | 34 |
| B. Specifications..... | 2 | H. Detailed Alignment Procedure..... | 50 |
| C. Pin Assignment..... | 4 | Regulation of Hi-voltage | |
| Input Signal Timings | | Regulation of Picture Geometrical | |
| D. Block Diagram..... | 7 | Preset Mode Alignment | |
| Monitor Main Board Block Diagram | | Regulation of White Balance | |
| Power Supply Block Diagram | | YPbPr Color | |
| Sync Board Block Diagram | | Focus Regulation | |
| Line Doubler Block Diagram | | Dynamic convergence regulation | |
| Power Factor and Audio Block Diagram | | I. Measured Waveforms..... | 55 |
| E. Controls..... | 10 | J. Spare Parts List..... | 65 |
| F. Description of Circuits..... | 23 | • Wiring Diagram | |
| Main Board | | • PCB Layout | |
| Horizontal Oscillation Circuit | | • Circuit Diagrams | |
| Vertical Deflection Circuit | | • Exploding Diagram | |
| Power Supply Circuit | | | |
| CPU Circuit | | | |
| CRT Board | | | |
| Video Circuit | | | |
| PFC and Audio Board | | | |
| Power Factor Controller Circuit | | | |
| Audio signal Amplify Circuit | | | |
| Sync Board | | | |
| YPbPr selector | | | |
| YPbPr to RGB matrix | | | |
| Mask Circuit | | | |
| Line Doubler Board | | | |

Features

- ◆ Multi-scanning at horizontal frequencies between 30~50KHz and vertical frequencies between 50~120Hz.
- ◆ 1024*768 maximum resolution.
- ◆ 30 inch viewable diagonal Invar Shadow Mask picture tube.
- ◆ Fine pitch 16:9 high resolution CRT.
- ◆ Built-in stereo speakers.
- ◆ BBE® sound effect system.
- ◆ Excellent gray scale linearity.
- ◆ Excellent color fidelity.
- ◆ Excellent plain field uniformity.
- ◆ High light output at specified resolution.
- ◆ Displays all HDTV formats and SVGA.
- ◆ Composite, RGB and VGA input.
- ◆ Accepts Tri-Level sync.
- ◆ Wide video bandwidth (40MHz).
- ◆ Oversized high voltage power supply.
- ◆ Double shield low noise structure design.
- ◆ RS-232 Remote control port.
- ◆ Professional / commercial and High-End home theater applications.
- ◆ Compatible with IBM VGA.
- ◆ Windows® 95 Plug & Play compatible.

Specifications

- ◆ **CRT Size**..... 32" (30" viewable diagonal)
- ◆ **CRT Type**..... 0.73mm stripe trios at center, 105° diagonal deflection angle INVAR
Shadow Mask
- ◆ **Max. Resolution**..... 1920 x 1080 (interlaced)
1024 x 768 (non-interlaced)
- ◆ **Synchronization**
 - **Horizontal**..... 30KHz - 50KHz
 - **Vertical**..... 50Hz - 120Hz
- ◆ **Display Size (H x V)**
 - **Full Scan**..... 668mm x 378mm
- ◆ **Video Dot Clock**..... 40MHz
- ◆ **Input Signal**
 - **VGA**..... Video: RGB Analog, 0.7Vp-p / 75 Ohms
Sync: Separate Sync (TTL level)
Horizontal Sync: Positive / Negative
Vertical Sync: Positive / Negative
 - **RGBHV**..... Video: RGB Analog, 0.7Vp-p / 75 Ohms
Sync: Separate Sync (TTL level)
Horizontal Sync: Positive / Negative
Vertical Sync: Positive / Negative
 - **Composite Video**..... 1Vp-p / 75 Ohms (NTSC Compatible)
 - **S Video**..... 1Vp-p / 75 Ohms (NTSC Compatible)
 - **Y₁P_{b1}P_{r1}**..... Y: 1Vp-p (Picture 0.7Vp-p, Sync 0.3Vp-p) / 75 Ohms
P_b: ± 0.35Vp-p / 75 Ohms
P_r: ± 0.35Vp-p / 75 Ohms
 - **Y₂P_{b2}P_{r2}**..... Y: 1Vp-p (Picture 0.7Vp-p, Sync 0.3Vp-p) / 75 Ohms
P_b: ± 0.35Vp-p / 75 Ohms
P_r: ± 0.35Vp-p / 75 Ohms
- ◆ **Audio**
 - **Output Power (RMS)**..... 5W*2 (10% THD)
 - **Input Signal**..... 0.2 - 2.0 Vrms, > 12Kohm.
 - **Total Harmonic Distortion (THD)**..... 0.3% (3W*2)

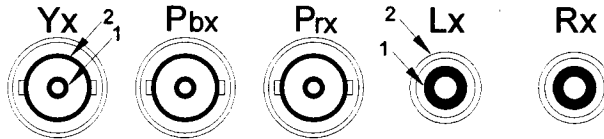
- **Frequency Response \pm 3db.....** 50Hz - 17KHz
- ◆ **RS232.....** UART
- ◆ **Power Input.....** Auto-switch, AC 90 - 240V, 50Hz / 60Hz
- ◆ **Power Consumption.....** 200 Watts (Typical)
- ◆ **Recommended Ambiance**
 - **Operating Temp.** 32°F to 104°F (0°C to 40°C)
 - **Storage Temp.** -40°F to +140°F (-40°C to +40°C)
 - **Humidity.....** 5% to 90%
- ◆ **Dimensions (H x W x D).....** 806mm x 580mm x 582mm
- ◆ **Weight Net.....** 65kg
- ◆ **Plug & Play.....** VESA® DDC1/2B
- ◆ **Certifications**
 - **Safety.....** UL, CUL, DHHS, TUV, CE
 - **EMI Standard.....** FCC Class B
 - **Power Saving.....** EPA Energy StarSM
- ◆ **Power Factor Consumption**
 - **AC 115V.....** PFC consumption 99%
 - **AC 230V.....** PFC consumption 97%

Pin Assignment

The pin assignment of the signal cable is listed the table below. This is for your information only; please do not attempt to devise your own connections as this may damage the monitor.

- Component: Y1Pb1Pr1 & Y2Pb2Pr2

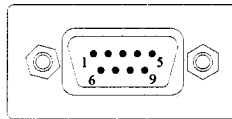
| Pin No. | Yx | Pbx | Prx | L | R |
|---------|----------|-----|-----|-----------|-----------|
| 1 | Y-Signal | Pb | Pr | L-Channel | R-Channel |
| 2 | GND | GND | GND | GND | GND |



- RS232C:

| Pin No. | Pin Name | Pin No. | Pin Name |
|---------|----------|---------|----------|
| 1 | NC | 6 | NC |
| 2 | Rx | 7 | NC |
| 3 | Tx | 8 | NC |
| 4 | NC | 9 | GND |
| 5 | NC | | |

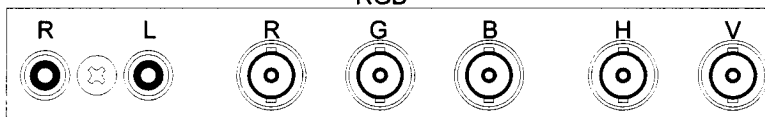
RS232



- RGB:

| Pin No. | R | L | R | G | B | H | V |
|---------|-----------|-----------|-----|-------|------|--------|--------|
| 1 | R-Channel | L-Channel | Red | Green | Blue | H-Sync | V-Sync |
| 2 | GND | GND | GND | GND | GND | GND | GND |

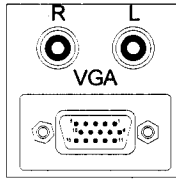
RGB



• VGA:

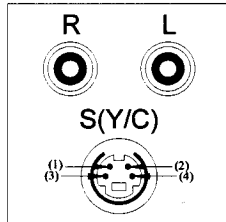
| Pin No. | R | L |
|---------|-----------|-----------|
| 1 | R-Channel | L-Channel |
| 2 | GND | GND |

| Pin No. | Pin Name | Pin No. | Pin Name |
|---------|------------|---------|-----------|
| 1 | Red | 9 | +5 option |
| 2 | Green | 10 | Ground |
| 3 | Blue | 11 | ID0 |
| 4 | Ground | 12 | SDA |
| 5 | DDC return | 13 | H-Sync |
| 6 | R-Ground | 14 | V-Sync |
| 7 | G-Ground | 15 | SCL |
| 8 | B-Ground | | |



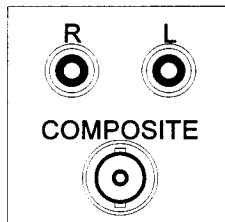
• S-Video:

| Pin No. | R | L | Pin No. | S(Y/C) |
|---------|-----------|-----------|---------|----------|
| 1 | R-Channel | L-Channel | (1) | Y-Signal |
| | | | (2) | Color |
| | | | (3) | GND |
| 2 | GND | GND | (4) | GND |



• Composite:

| Pin No. | R | L | Composite |
|---------|-----------|-----------|-----------|
| 1 | R-Channel | L-Channel | Video |
| 2 | GND | GND | GND |

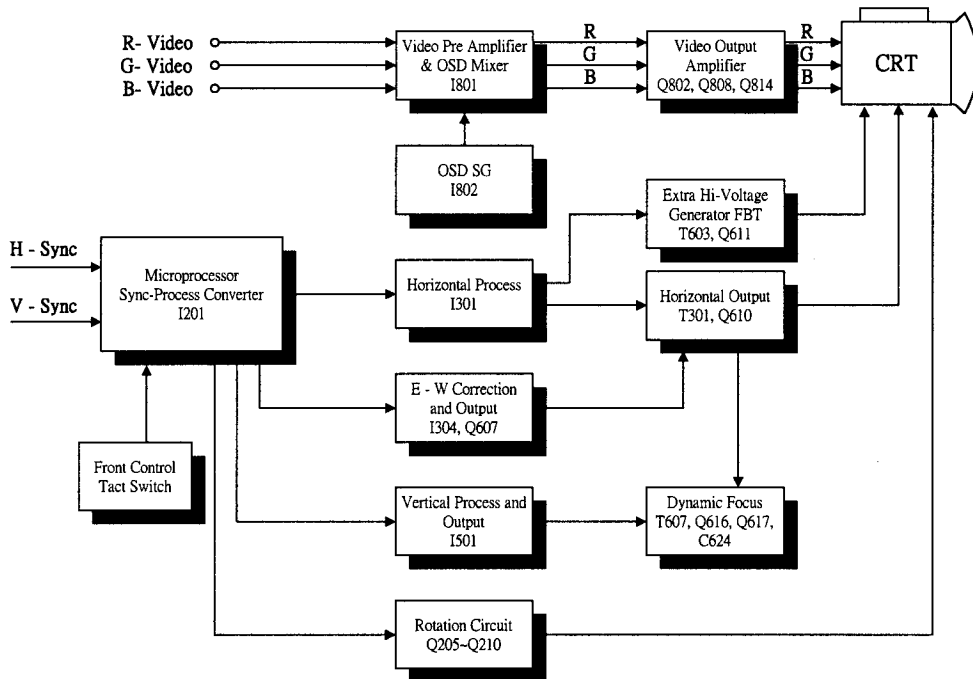


Format and Timings

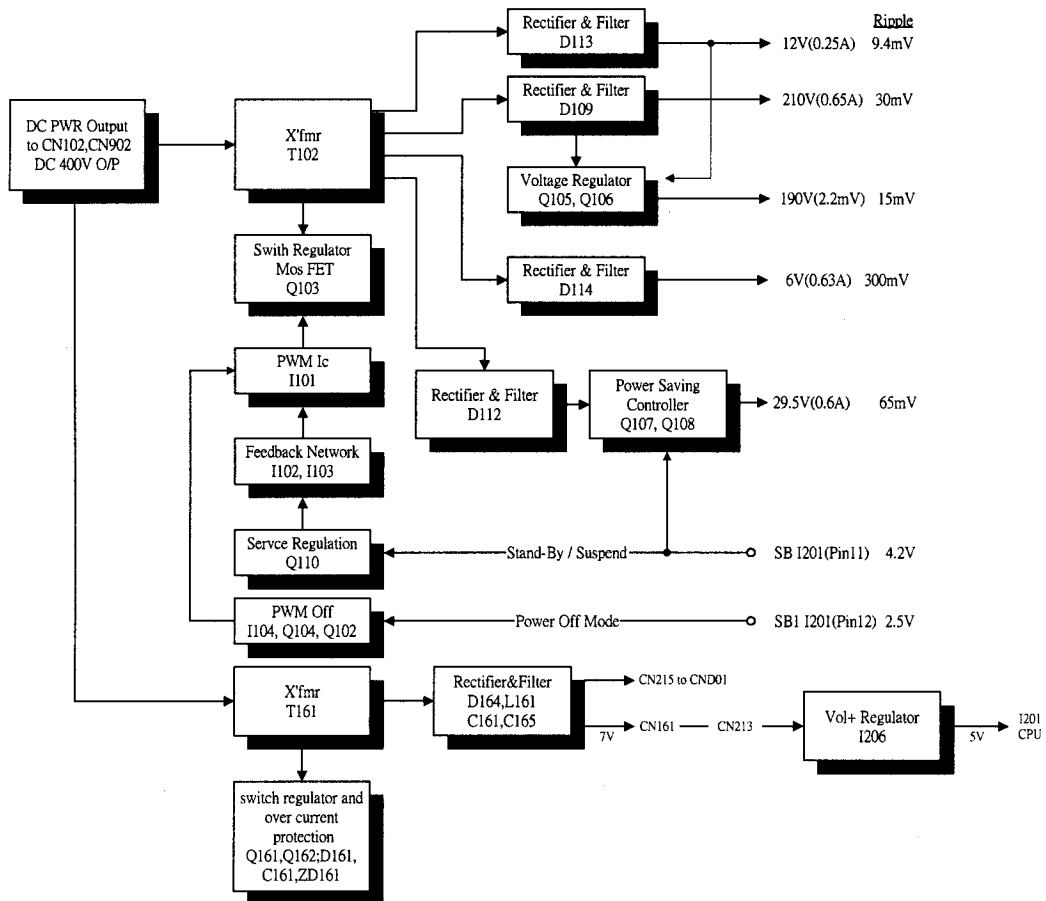
| Mode | 640 x 480 @ 60Hz | | 800 x 600 @ 72Hz | | 1024 x 768 @ 60Hz | | 480 P | | 720 P | | 1080 I | |
|--------------------------|------------------|-------------|------------------|-------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Horizontal Pixels | 640 Pixels | | 800 Pixels | | 1024 Pixels | | 640 Pixels | | 1280 Pixels | | 1920 Pixels | |
| Vertical Pixels | 480 Lines | | 600 Lines | | 768 Lines | | 480 Lines | | 720 Lines | | 1080 Lines | |
| Horizontal Frequency | 31.469 kHz | | 48.077 kHz | | 48.363 kHz | | 31.469 kHz | | 45.000 kHz | | 33.750 kHz | |
| Vertical Frequency | 59.940 Hz | | 72.188 Hz | | 60.004 Hz | | 60.000 Hz | | 60.000 Hz | | 60.000 Hz | |
| Pixel Clock | 25.175 MHz | 39.722 nSec | 50.000 MHz | 20.00 nSec | 65.000 MHz | 15.358 nSec | 25.175 MHz | 39.722 nSec | 74.25 MHz | 13.468 nSec | 74.25 MHz | 13.468 nSec |
| Horizontal Sync Polarity | - | | - | | - | | Sync - on Y | | Sync - on Y | | Sync - on Y | |
| Vertical Sync Polarity | - | | - | | - | | | | | | | |
| Horizontal Total Time | 31.778 uSec | 800 Pixels | 20.800 uSec | 1040 Pixels | 20.667 uSec | 1344 Pixels | 31.778 uSec | 800 Pixels | 22.222 uSec | 1650 Pixels | 29.630 uSec | 2200 Pixels |
| Horizontal Active Time | 26.422 uSec | 640 Pixels | 16.000 uSec | 800 Pixels | 15.754 uSec | 1024 Pixels | 25.422 uSec | 640 Pixels | 17.239 uSec | 1280 Pixels | 25.859 uSec | 1920 Pixels |
| Horizontal Blanking Time | 6.356 uSec | 160 Pixels | 4.800 uSec | 240 Pixels | 4.923 uSec | 320 Pixels | 5.350 uSec | 160 Pixels | 4.983 uSec | 370 Pixels | 3.771 uSec | 280 Pixels |
| Horizontal Front Porch | 0.636 uSec | 16 Pixels | 1.120 uSec | 56 Pixels | 0.369 uSec | 24 Pixels | 0.750 uSec | 16 Pixels | 0.942 uSec | 70 Pixels | 0.593 uSec | 44 Pixels |
| Horizontal Sync Time | 3.813 uSec | 96 Pixels | 2.400 uSec | 120 Pixels | 2.092 uSec | 136 Pixels | 2.350 uSec | 59 Pixels | 0.539 uSec | 40 Pixels | 0.593 uSec | 44 Pixels |
| Horizontal Back Porch | 1.907 uSec | 48 Pixels | 1.280 uSec | 64 Pixels | 2.462 uSec | 160 Pixels | 2.250 uSec | 57 Pixels | 3.501 uSec | 260 Pixels | 2.586 uSec | 192 Pixels |
| Vertical Total Time | 16.683 mSec | 525 Lines | 13.853 mSec | 666 Lines | 16.666 mSec | 806 Lines | 16.683 mSec | 525 Lines | 16.667 mSec | 750 Lines | 16.667 mSec | 562 Lines |
| Vertical Active Time | 15.253 mSec | 480 Lines | 12.480 mSec | 600 Lines | 15.880 mSec | 768 Lines | 15.253 mSec | 480 Lines | 16.000 mSec | 720 Lines | 16.000 mSec | 540 Lines |
| Vertical Blanking Time | 1.430 mSec | 45 Lines | 1.373 mSec | 66 Lines | 0.768 mSec | 38 Lines | 1.430 mSec | 45 Lines | 0.667 mSec | 30 Lines | 0.667 mSec | 22 Lines |
| Vertical Front Porch | 0.318 mSec | 10 Lines | 0.770 mSec | 37 Lines | 0.062 mSec | 3 Lines | 0.286 mSec | 9 Lines | 0.111 mSec | 5 Lines | 0.059 mSec | 2 Lines |
| Vertical Sync Time | 0.064 mSec | 2 Lines | 0.125 mSec | 6 Lines | 0.124 mSec | 6 Lines | 0.191 mSec | 6 Lines | 0.111 mSec | 5 Lines | 0.074 mSec | 2 Lines |
| Vertical Back Porch | 1.049 mSec | 33 Lines | 0.478 mSec | 23 Lines | 0.600 mSec | 29 Lines | 0.956 mSec | 30 Lines | 0.444 mSec | 20 Lines | 0.533 mSec | 18 Lines |

Block Diagram

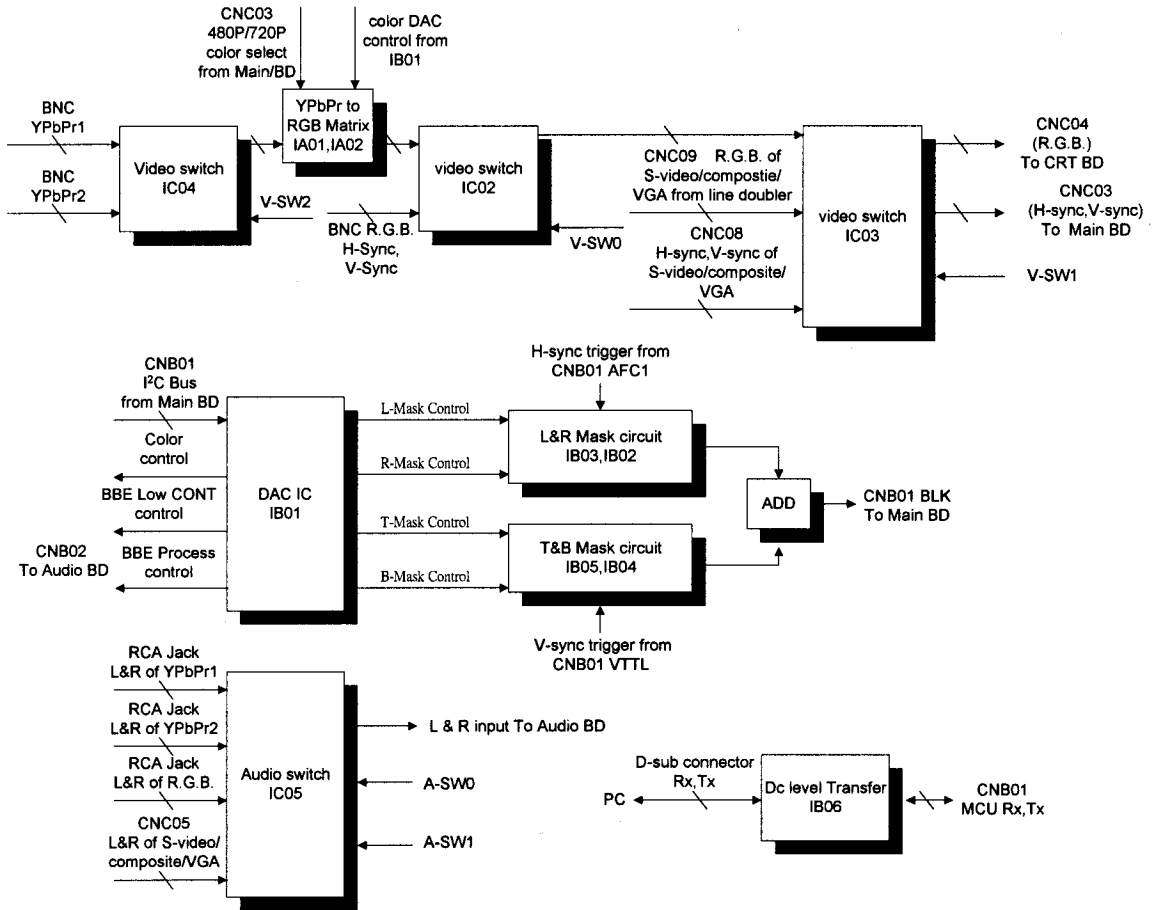
• Monitor Main Board Block Diagram



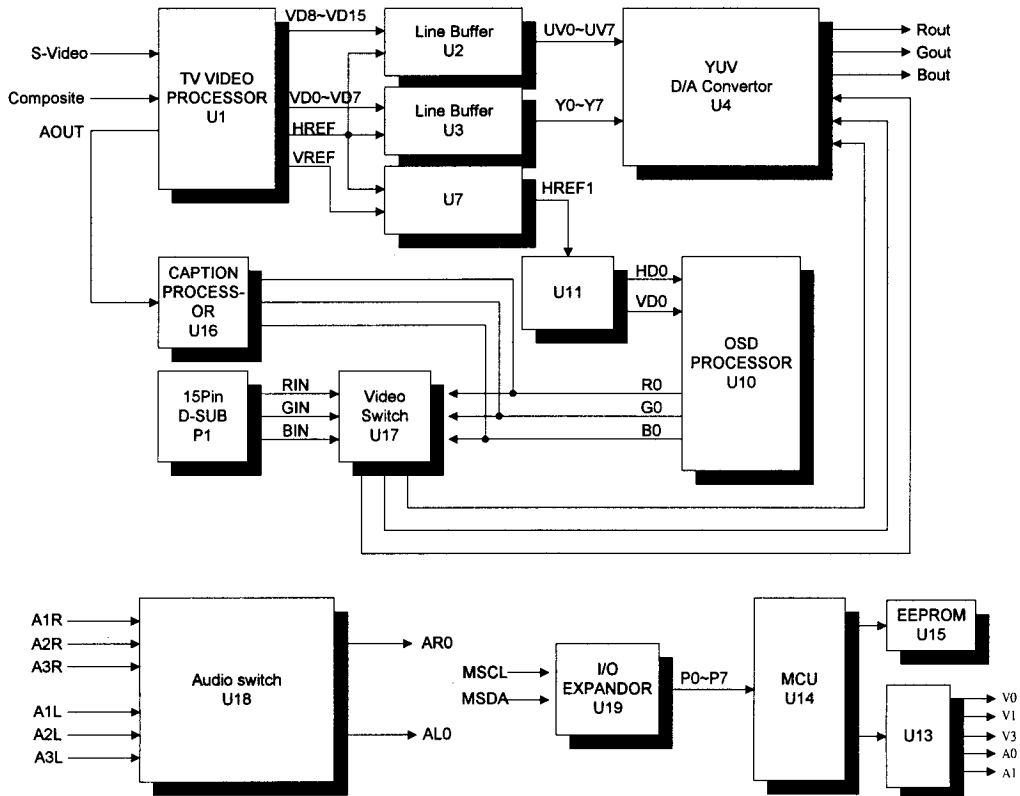
• Power Supply Block Diagram



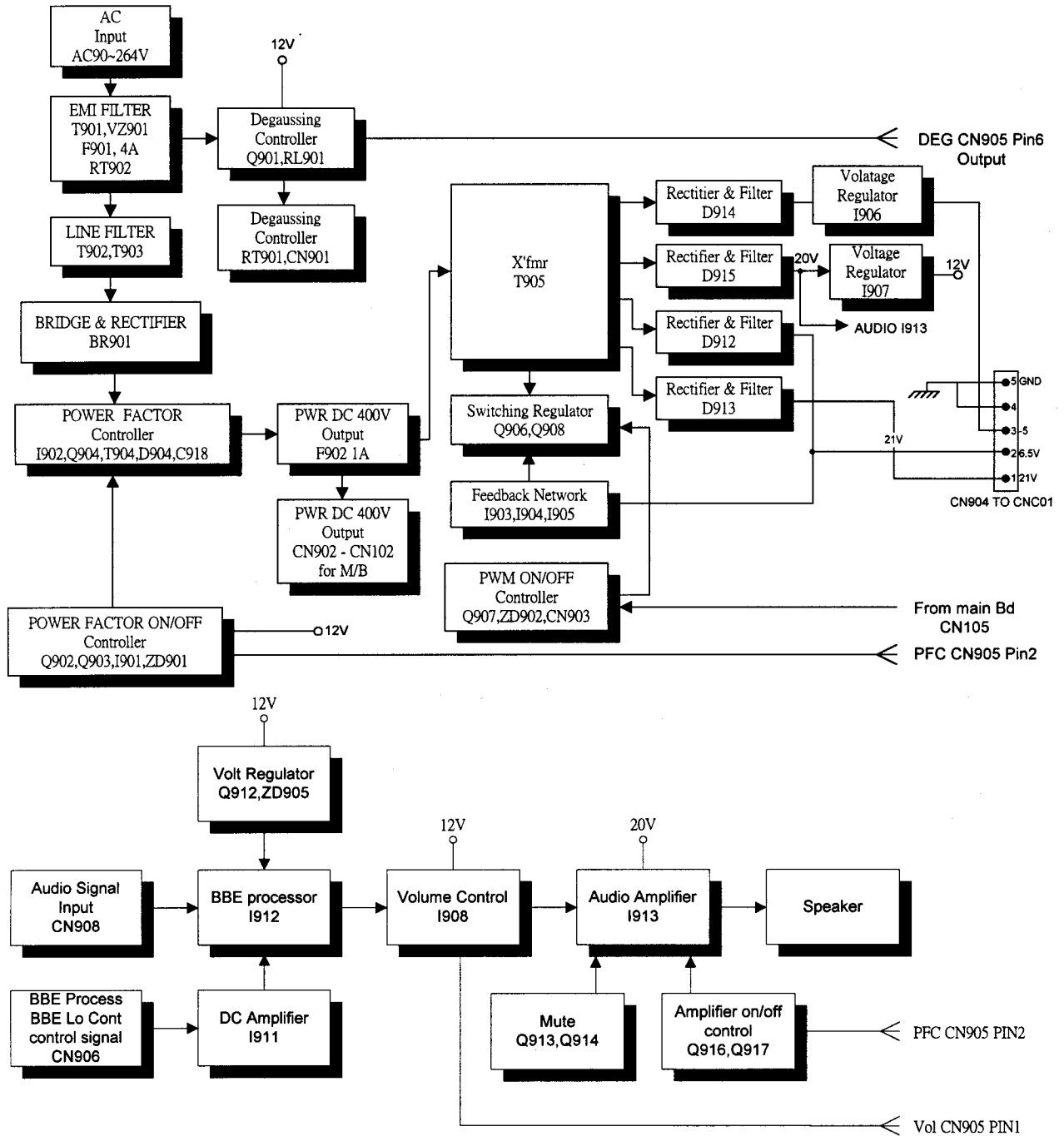
• Sync Board Block Diagram



• Line Doubler Block Diagram



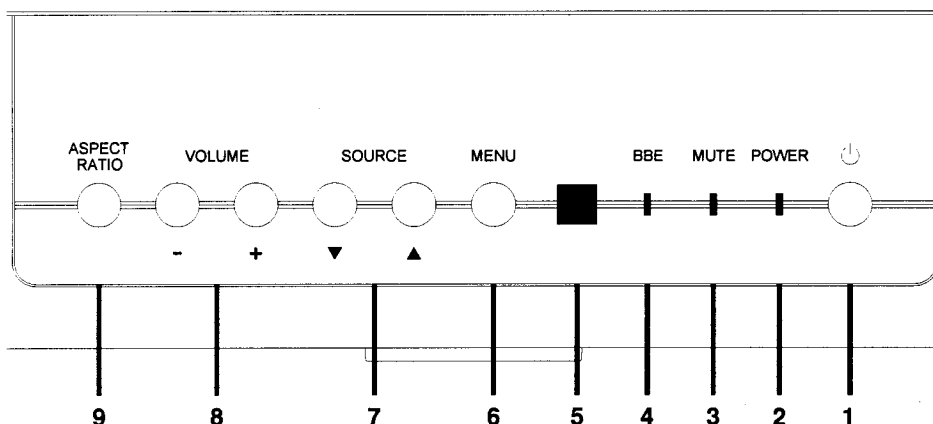
• Power Factor and Audio Block Diagram



Controls

There are a few switches, indicators and User Adjustable Controls on the AF3.0HD. These are to provide the user a way to maximize the display to his or her preferences. A description of their functions is as follows:

>Front Panel Controls



1. Power Button

Powers the unit ON or OFF

2. Power LED

Shows yellow/green when the power is ON and the Power and Signal Cables are properly connected. Shows amber when in Power Saving Mode.

3. Mute LED

Shows red when the AF3.0HD internal speakers have been muted.

4. BBE® LED

Shows green when the AF3.0HD BBE® sound processing is in the active mode.

5. IR Receiver Window

Point the Remote Controller to here when pressing the Controller Buttons so that the commands reach the IR Receiver.

6. Menu Button

Press to display the On-Screen Display (OSD) menu options. To select an option press the button to move the blue highlight on the screen to the right.

7. Source Buttons (▲ / ▼)

Use to step up or down through the six Video Input Modes. After the menu Button has been pressed and the OSD activated these buttons operate as Scroll Up/Down Buttons. As Scroll Up/Down Buttons they are used to scroll the Red Cursor of the OSD Up or Down the Sub-Menu to select a Function for adjustment.

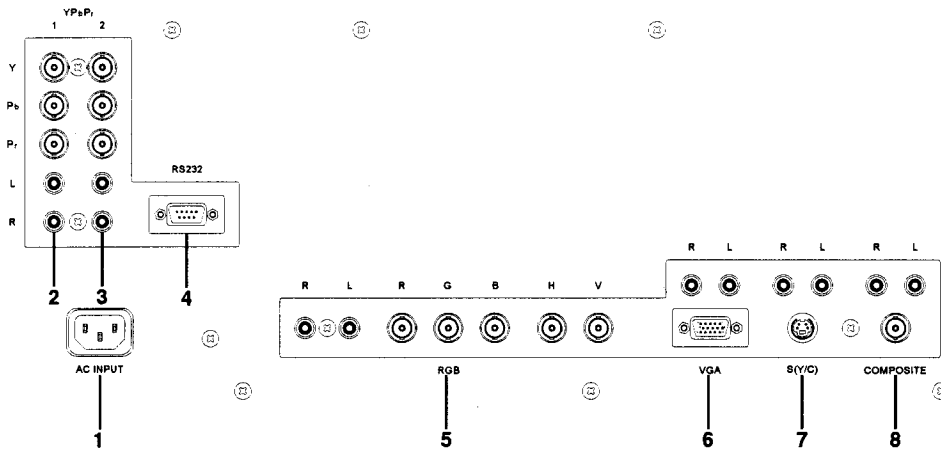
8. Volume Buttons (+ / -)

Use to adjust the Sound Level. After the Menu Button has been pressed and the OSD activated these buttons adjust the value of the selected Function, or select an Aspect Ratio.

9. Aspect Ratio Button

Press to display through OSD the Aspect Ratio menu options.

>Rear Panel



1. Power Connector

Plug the Power Cord supplied with your AF3.0HD into here and the other end into your Power Socket.

2. YPbPr 1 inputs

Use to connect the Video and Audio output from a HDTV Receiver, HDVCR, HDDVD, etc., to the AF3.0HD. The Y, Pb and Pr use BNC Connectors and the Left and Right Audio use RCA Phono Connectors.

3. YPbPr 2 inputs

Use to connect the Video and Audio output from a HDTV Receiver, HDVCR, HDDVD, etc., to the AF3.0HD. The Y, Pb and Pr use BNC Connectors and the Left and Right Audio use RCA Phono Connectors.

4. RS232 Connector

Use to connect the RS232 port from a HDTV Receiver to the AF3.0HD.

5. RGB Inputs

Use to connect the Video and Audio output from a Computer to the AF3.0HD. The R, G, B, H Sync and V Sync use BNC Connectors and the Left and Right Audio use RCA Phono Connectors.

6. VGA Inputs

Use to connect the Video and Audio output from a Computer to the AF3.0HD. The Video uses a standard VGA Connector and the Left and Right Audio use RCA Phono Connectors.

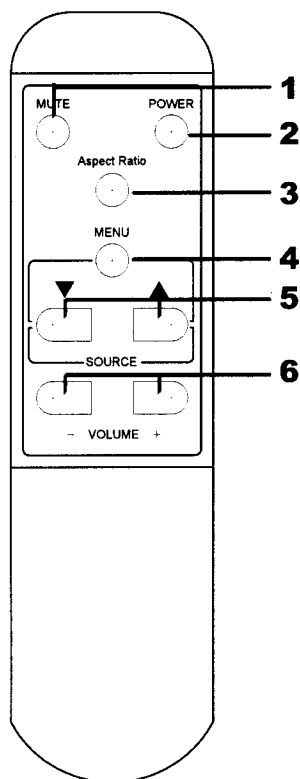
7. S-Video Inputs

Use to connect the Video and Audio output from a Super VHS(S-VHS) standard Camcorder, VCR, DVD, etc. to the AF3.0HD. The s-VHS Video uses standard S-Video Connector and the Left and Right Audio use RCA Phono Connectors.

8. Composite Inputs

Use to connect the Video and Audio output from a standard Camcorder, VCR, DVD, etc., to the AF3.0HD. The Composite Video uses a BNC Connector and the Left and Right Audio use RCA Phono Connectors.

➤ User Remote Controller



1. Mute Button

Mutes the AF3.0HD internal speakers. Press again to switch the internal speakers on again.

2. Power Button

Powers the unit ON or OFF.

3. Aspect Ratio Button

Press to display the aspect ratio menu options.

4. Menu Button

Press to display the On-Screen Display (OSD) menu options. To select options press the button to move the blue highlight on the screen to the right.

5. Source Buttons (▲ / ▼)

Use to step up or down through the six Video Input Modes. After the Menu Button has been pressed and the OSD activated these buttons operate as Scroll Up/Down Buttons. As Scroll Up/Down Buttons they are used to scroll the Red Cursor of the OSD Up or Down the Sub-Menu to select a function for adjustment.

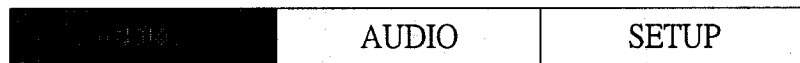
6. Volume Buttons (+ / -)

Use to adjust the Sound Level. After the Menu Button has been pressed and the OSD activated these buttons adjust the value of the selected Function, or to select an Aspect Ratio.

➤ User Controller

1. Menu mode select : Video mode / Audio mode / Setup mode

a. Press the Menu button: Video mode



- BLACK LEVEL 45.0KHz 60Hz
- CONTRAST
- COLOR NTSC
- TINT NTSC
- COLOR YPbPr



b. Press the Menu button: Audio mode



- VOLUME 45.0KHz 60Hz
- BBE ON/OFF
- BBE PROCESS
- BBE LOW CONT



c. Press the Menu button: Setup mode



- MASK ON/OFF 45.0KHz 60Hz
- MASK TOP
- MASK BOTTOM
- MASK RIGHT OFF
- MASK LEFT
- CAPTIONS

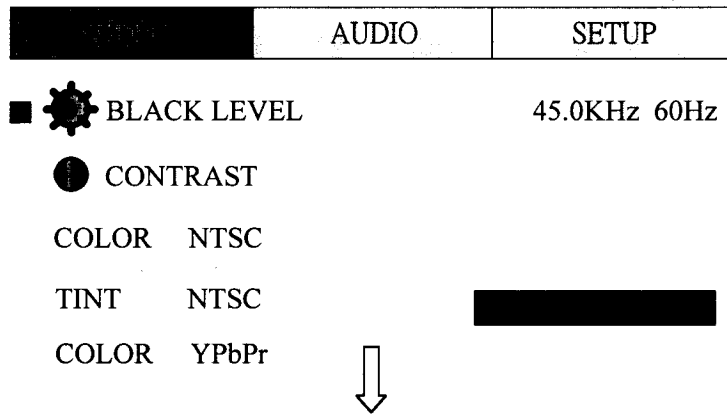


d. Press the Menu button or let the menu screen time out just a few seconds.

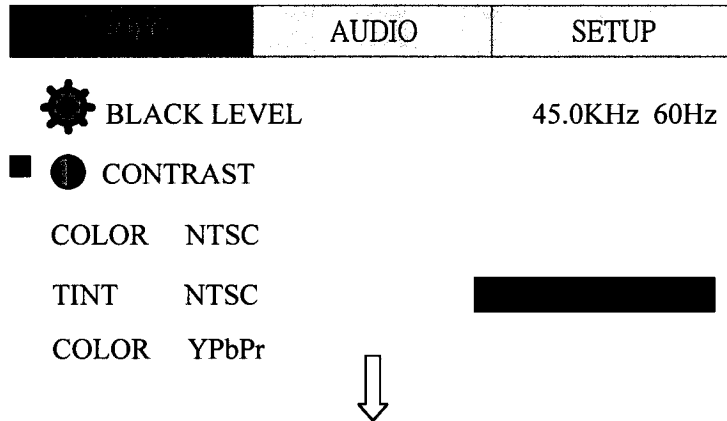
EXIT

2. Video mode

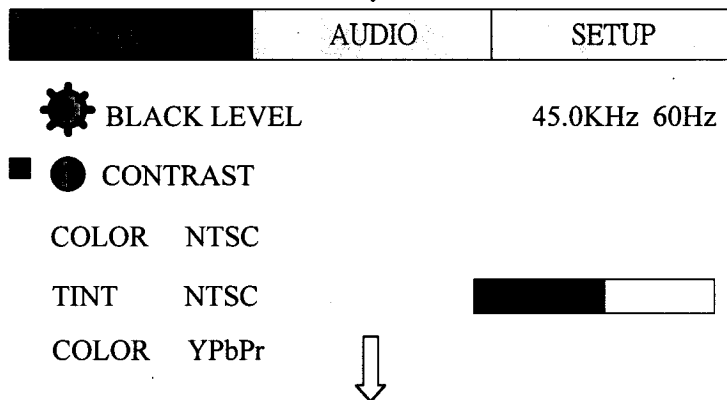
a. Press the Menu button to move the blue indicator at Video mode.



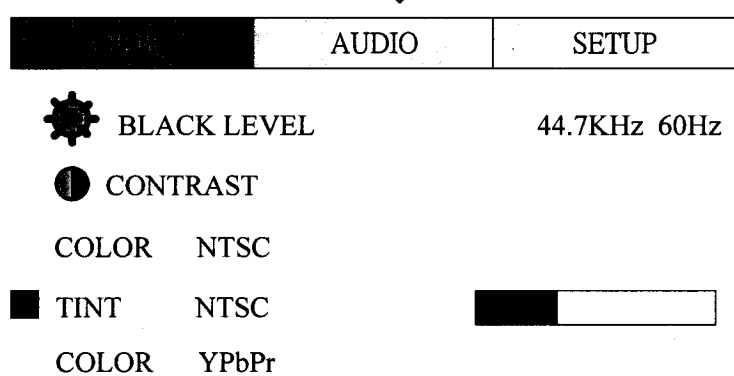
b. Press the Source button to scroll the red cursor up/down the sub-menu to select a control for adjustment.



c. Press the Volume button to adjust various menu options.



d. Press the Source button to select another settings sub-menu, or press the Menu button to select another menu.



■  **BLACK LEVEL**

Adjusts the Black Level (Cut-Off) of the image.

■  **CONTRAST**

Adjusts the contrast between the Black and White Levels of the image.

■ **COLOR NTSC**

Adjusts the Color Saturation Level of the image. This adjustment is only for the non-HD Video modes.

■ **TINT NTSC**

Adjusts the Color Tint (Hue) of the image. This control is typically used to adjust the display for correct skin tones. This adjustment is only for the non-HD Video modes.


■ **COLOR YPbPr**

Adjusts the Color Saturation Level of the image. This adjustment is only for the HD Video modes.

3. Audio mode

a. Press the Menu button to move the blue indicator at Audio mode.



■ VOLUME 45.0KHz 60Hz
 BBE ON/OFF
 BBE PROCESS 
 BBE LOW CONT



b. Press the Source button to scroll the red cursor up/down the sub-menu to select a control for adjustment.



VOLUME 45.0KHz 60Hz
 ■ BBE ON/OFF
 BBE PROCESS OFF
 BBE LOW CONT



c. Press the Volume button to adjust various menu options.



VOLUME 45.0KHz 60Hz
 ■ BBE ON/OFF
 BBE PROCESS ON
 BBE LOW CONT



d. Press the Source button to select another settings sub-menu, or press the Menu button to select another menu.



VOLUME 44.7KHz 60Hz
 BBE ON/OFF
 BBE PROCESS 
 ■ BBE LOW CONT

■ **VOLUME**

Adjusts the sound level.

■ **BBE ON/OFF**

Selects the BBE sound process mode ON or OFF.

■ **BBE PROCESS**

Activates the BBE process when BBE is ON.

■ **BBE LOW CONT**

Adjustment of bass boost plus dynamic balance of the treble constituent of the sound when BBE is ON.

4. Setup mode

a. Press the Menu button to move the blue indicator at Setup mode.

| VIDEO | AUDIO | |
|---------------|-------|--------------|
| ■ MASK ON/OFF | | 45.0KHz 60Hz |
| MASK TOP | | |
| MASK BOTTOM | | |
| MASK RIGHT | | ON |
| MASK LEFT | | |
| CAPTIONS | | |



b. Press the Source button to scroll the red cursor up/down the sub-menu to select a control for adjustment.

| VIDEO | AUDIO | |
|-------------|-------|----------------------|
| MASK ON/OFF | | 45.0KHz 60Hz |
| ■ MASK TOP | | |
| MASK BOTTOM | | |
| MASK RIGHT | | <input type="text"/> |
| MASK LEFT | | |
| CAPTIONS | | |



c. Press the Volume button to adjust various menu options.

| VIDEO | AUDIO | |
|-------------|-------|----------------------|
| MASK ON/OFF | | 45.0KHz 60Hz |
| ■ MASK TOP | | |
| MASK BOTTOM | | |
| MASK RIGHT | | <input type="text"/> |
| MASK LEFT | | |
| CAPTIONS | | |



d. Press the Source button to select another settings sub-menu, or press the Menu button to select another menu.

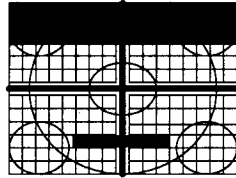
| VIDEO | AUDIO | |
|-------------|-------|----------------------|
| MASK ON/OFF | | 45.0KHz 60Hz |
| MASK TOP | | |
| MASK BOTTOM | | |
| MASK RIGHT | | <input type="text"/> |
| ■ MASK LEFT | | |
| CAPTIONS | | |

■ **MASK ON/OFF**

Switch Text Mask ON or OFF.

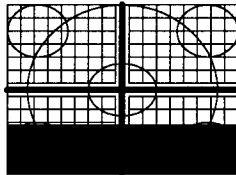
■ **MASK TOP**

Adjusts the top mask area when MASK is ON.



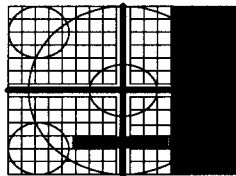
■ **MASK BOTTOM**

Adjusts the bottom mask area when MASK is ON.



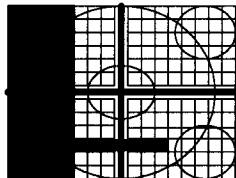
■ **MASK RIGHT**

Adjusts the right mask area when MASK is ON.



■ **MASK LEFT**

Adjusts the left mask area when MASK is ON.



■ **CAPTIONS**

Switch caption ON or OFF. This function only effective with composite input and s-video input.

■ **POWER SAVING**

Switch power saving mode ON or OFF.

■ **COLOR TEMP**

Select color preset, press the "Volume +/-" button to select 6500°K / 5400°K / Custom.

■ **RECALL**

Recall original factory presets.

■ **DEGAUSS**

Eliminates magnetic field build up from the display that could cause discoloration. The unit automatically degausses on start-up.

Note : normally is it only necessary to degauss if the unit has been moves.

5. Aspect Ratio

Depending upon the program content you can choose the matching format from the OSD menu.

[REDACTED]
1.66 EURO VISTA

1.77 HDTV

ANAMORPHIC

IF the video tape or video source is standard format please choose "1.33 NTSC".

[REDACTED]
1.33 NTSC

1.66 EURO VISTA

[REDACTED]
ANAMORPHIC

IF the video tape or video source is widescreen format please choose "1.77 HDTV".

[REDACTED]
1.33 NTSC

1.66 EURO VISTA

1.77 HDTV

IF the video tape or video source doesn't specify the format please choose "Anamorphic".

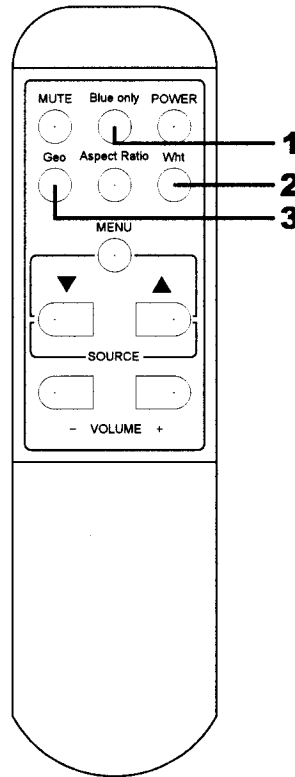
➤ Factory Mode Entry

1. Blue only Mode

Press "Blue only" button to enter Blue only mode then you can adjust tint and color (NTSC). The same way you can escape from Blue only mode.

2. White Balance Mode

- Apply 31KHz/60Hz signal on Monitor.
- Press "wht" button on remote controller to enter "white balance factory mode". Alternatively you can press front panel "Menu" button 3 times and the blue indicator shows "SETUP" then press "menu" button and "Volume -" button hold simultaneously until the factory OSD pattern shows up. The same way you can escape from factory mode.



c.

Rc R-cutoff

Bc B-cutoff

Gc G-cutoff

Rg R-gain

Brightness

Gg G-gain

Contrast

Bg B-gain

6500K
 Gc Bc Rg Gg Bg
 82

Press "VOLUME +/-" button to adjust current setting.

6500K
 Rc Bc Rg Gg Bg
 128

Press "SOURCE ▼ / ▲" button to select another setting.

5400K
 Rc Bc Rg Gg Bg
 95

Press aspect ratio button to change color TEMP preset.

d.








| | 6500°K | 5400°K | Customer |
|--|------------------------------|-----------------|-----------------|
| Full Light Output (10fl-60fl) | X = 0.313± 0.02 | X = 0.335± 0.02 | X = 0.335± 0.02 |
| | Y = 0.329± 0.02 | Y = 0.343± 0.02 | Y = 0.343± 0.02 |
| | Y = 25fl± 3fl (FULL WHITE) | | |
| | Y = 80fl± 5fl (Center Block) | | |
| Back ground | X = 0.313± 0.02 | X = 0.335± 0.02 | X = 0.335± 0.02 |
| | Y = 0.329± 0.02 | Y = 0.343± 0.02 | Y = 0.343± 0.02 |
| | Y = 0.2fl± 0.2fl | | |

* Aspect Ratio set at 1.77

3. Geometry Mode

- Apply the preset timing mode you want setup on monitor.
- Press " Geo " button on remote controller then you can enter " geometry factory mode ". Alternatively you can press front panel " Menu " button 3 times and the blue indicator shows " SETUP " then press " menu " button and " Volume + " button hold simultaneously until the OSD pattern shows up. The same way you can escape from factory mode.

c.

- | | | | |
|---|------------------|---|-------------------|
|  | Horizontal size |  | Vertical phase |
|  | Horizontal phase |  | Pincushion |
|  | Vertical size |  | Keystone |
| | |  | Rotation (tilt) |



192

Press "VOLUME + / -" button to adjust current setting.



72

Press "SOURCE ▼ / ▲" button to select another setting.



121

Press aspect ratio button to select another aspect ratio.

Description of Circuits

Main Board

• **Horizontal Oscillation Circuit**

I301 contains full autosync capability, phase detector and output driver and mode change frequency ramping, for protection of the horizontal deflection output transistor. DC controls and complete freedom from manufacturing ring trims-internal VCO capacitor trimmed on chip. It has a continuous capture range from 22kHz to 90kHz.



• **Phase Detector**



The output at pin 19 of I201 is composed of H-sync pulses with a constant duty cycle. The H-sync pulses are used as the trigger source for pin 3 of I301. AFC pulses from horizontal output stage are transmitted to the integrated circuit that contains R331, R314 and ZD304 to provide flyback pulses at pin 6 of I301. The phase detector in I301 compares the phase relationship of the sync input (by DC control at pin 10), and flyback pulses, and send the gated current out of pin 12. The gated current goes through the low pass filter that comprises C333 and R320, and so provides a DC voltage at pin 12 to control and synchronize the horizontal output at pin 7. The output stage at pin 7 is open collector and so needs a pull-up resistor. The output duty at pin 1 is determined by the voltage divider of R310 and R313. The output of I301 (pin 7) is fed to the base of Q613 and Q305 to drive, through T603 and T301, the horizontal and Hi-voltage output circuit.

• **X-Ray Protection Circuit**

When the Hi-voltage approaches the safe limit of CRT, the X-ray protection circuit will shut down the Hi-voltage. The X-ray protection circuit trigger point is designed to be $32\text{kV} \pm 1.5\text{kV}$. The voltage at the X-ray test point is from the FBT and is proportional to the Hi-voltage. When Hi-voltage increases to the trigger point, the X-ray test point voltage increases also and causes zener diode ZD305 to zener and so pull up the voltage on pin 5 of I301. This IC contains a SCR circuit that is connected to pin 5 and once the voltage reaches the trigger point the SCR circuit switches the voltage on pin 7 of I301 to a high level and shuts down the Hi-voltage output (FBT). The SCR circuit will remain in this state until the power has been removed.

• Bow/Tilt Circuit

The Bow circuit adjusts the horizontal phase to compensate the Bow distortion the vertical sawtooth wave, generated by the integrated circuit I303 and Q301, R302, C335. The sawtooth wave through the integrated circuit again, which are I303, Q302, and C338. The Bow circuit outputs a parabolic wave that is ,  adjusted by VR304, and fed to pin10 of I301 to adjust the horizontal phase to correct the bow distortion.

The Tilt circuit is to adjust horizontal phase to compensate the tilt distortion. A vertical sawtooth wave is generated by the integrated circuit I303 and Q303, R305, C342. The Tilt circuit outputs a sawtooth wave which is  or  depending on the adjustment of VR302, and this is fed to pin 10 of I301 to adjust the horizontal phase to correct the tilt distortion.

• DC to DC Circuit for Horizontal Deflection

In order to maintain the stability of the Final Anode Voltage as the picture content changes, this model has separate horizontal deflection and hi-voltage circuits. The horizontal scan frequency is from 24kHz to 40kHz. A DC-to-DC circuit is required to change the B⁺ supply to the horizontal deflection circuit for different horizontal frequencies.

I702 (HC4538) acts as a monostable to provide a constant duty cycle for the low level output at pin 7. The horizontal oscillation output, generated from pin 7 of I301, is fed via R337 to trigger this monostable FREQ. R702 and C706 determine the maximum duty cycle of the low-level output at pin 7 of I702. The maximum duty cycle at pin 7 is,

$$\begin{aligned}\text{Maximum Duty Cycle} &= 0.707 \times R702 \times C706 \\ &= 0.707 \times 8.87\text{k}\Omega \times 2700\text{pF} \\ &= 16.9\mu\text{S}\end{aligned}$$

The amount of the current passing through R717 and the emitter of Q703 will reduce the duty cycle of the low-level output. The feedback circuit controls the amount of this current and is used to adjust the horizontal size. The feedback circuit contains VR603 and I701A (LM358). The feedback voltage level, which comes from the horizontal output circuit, appears at VR603 (SUB H-size) and is fed to pin 2 of I701A. The output of I701A, pin 1, controls the current passing through R717 and the emitter of Q703. The feedback circuit is very important not only to be able to adjust the horizontal size, but also to stabilize the whole system and to prevent the thermal drift effect on the components. C720, R743, C719 and R744 are the components for AC feedback circuit to eliminate this effect.

• Horizontal Output Circuit and Pincushion/Keystone Circuit

The DC-DC circuit outputs an average DC voltage across C607 to provide the bias B^+ to T602 for the horizontal output stage. The horizontal output circuit is a traditional flyback type and it comprises of T602, D613, D614, C603, C604, Q610, C605, C606, H-DY and diode modulation circuit which provides the east-west pincushion correction. Q608 and Q619 function as a switch, that is short or open depending upon the horizontal frequency. The truth table as follows:

| | | | | |
|---------|-----|--------|-------|--------|
| Ratio \ | 4:3 | S-CAP1 | | S-CAP0 |
| 16:9 | 0 | 1 | 36K ↑ | 1 |
| 4:3 | 1 | 0 | 36K ↓ | 0 |

C605, C606 and C641 are the CS capacitors which are to compensate for the horizontal linearity according to the horizontal frequency and Aspect Ratio. Q609 and Q608 accepts the command from the CPU **S-CAP0**. C628, C629, VR601, Q605, R377, Q612, D603 and D604 form the raster adjustment circuit. A positive or negative DC current, decided by adjusting VR601, passes through L603 and R601 providing DC current to the H-DY to adjust the raster centering. The east -west pincushion circuit provides parabolic wave across C602 to modulate horizontal output B^+ . The parabolic wave comes from Q607, Q604, Q603 and I304B (pin7). Those components function as a linear amplifier. The parabolic waveform is obtained by picking up the voltage waveform at the V-DY minus terminal **E** and it passing through an integrator made up of R360, VR301 and C318.

This parabolic wave is fed to the base of Q310. The gain of the differential amplifier that comprises of Q310, Q308, and Q309, can be controlled by the DC level appearing at the base of Q309. The Side Pin voltage **SIDE - PIN** is generated from the CPU to provide the function of the external Pincushion control. The output of this differential amplifier, collector of Q309, sends the parabolic waveform to a buffer (I304B) and is fed to the base of Q603 to make the circuit work.

• Vertical Deflection Circuit

I501 comprises an oscillator, ramp generator, power amplifier, flyback generator etc., to provide a vertical deflection circuit. Pin 3, 4 and 6 are for oscillation where ZD502 is applied to control the oblique of the oscillator to increase it smoothly. Pin 5 is the sync signal input while the output is at pin 1, which is the output of the power amplifier to drive the V-DY. Changing the sink current at the pin 7 controls the vertical height.

The duty cycle of voltage waveform at pin 45 of I201 (CPU) will be changed according to the different timing. The duty of voltage waveform at pin 46 of I201 (CPU) will be changed by adjusting the external control V-size **↕**. Both control signals, after passing through low pass filter appear as a DC level

that is fed to pin 3 of I304A to change the vertical height.

Q501 and Q502 are emitter followers to provide a DC current in V-DY to change the vertical position on the screen. The control signal **V-CENTER**, appearing at the base of Q506 is a DC level which is passed through low pass filter, and sent to pin 47 of I201 (CPU).

VR501 is used to adjust V-linearity. V-sync and retrace pulses are fed to the base of Q504 to provide vertical blanking. The vertical blanking circuit contains Q504, Q503, D507, D506 and C510. The voltage at point **G**, 50V, is fed to the base of Q503. During V-sync input or vertical retrace time, Q504 is saturated and the emitter of Q503 is grounded, through C510, to drop the voltage at G1 below cut-off.

• DC to DC Circuit for Hi-voltage

A DC-to-DC horizontal circuit, similar to the DC-DC circuit for horizontal stage, has been used for the Hi-voltage. Pin 12 of I702 is used to trigger the monostable to provide a voltage waveform with a constant duty cycle that appears on the output at pin 9. The duty cycle of this waveform is determined by R722, C707 and the amount of current through R723, which is controlled by feedback circuit. The output of the monostable is fed to Q708, Q710 and Q709 to provide enough current to T608 for driving the DC-DC output stage. Q614, R649, T604, D606 and C608 are the main components to form the DC-DC switching and rectifier circuit and to provide the biasing B^+ for Hi-voltage. The biasing B^+ changes according to horizontal frequencies and the amount of feedback from VR602.

The voltage level picked-up from VR602 is proportional to the Hi-voltage. It is fed to pin 6 of I701B. Pin 7 of I701B sends the control DC level to change the current through R723 and Q704 to change (and stabilize) the Hi-voltage. VR602 is for adjusting the Hi-voltage. The feedback circuit improves the high voltage regulation. When the Hi-voltage increases, the feedback from VR602 to I701 and Q704 increases. The duty cycle of the output (pin 9 of I702) decreases and reduces the "ON" time for Q614, lowering the biasing B^+ for Hi-voltage (across C608) and thus the Hi-voltage.

• Hi-voltage Output Circuit

The Hi-voltage generating circuit contains Q611, C609 and the Flyback Transformer (FBT). In order to drive Q611, T603 and Q613 must provide enough current. The secondary windings of the FBT can supply pin outs for other functions, such as ABL, X-ray and Brightness Controls.

The following are the functions for these pin outs:

- P6:through D610, supplies 152V for the video circuit.
- P7:allows beam current detection for the ABL circuit.
- P9:through D608, provides the voltage for X-ray protection.
- P10: through D607, provides the -180V for G1 to control the brightness on the screen.

• Brightness Control and Spot Killer

The brightness level is set by the CPU sending a control voltage of between 3.75V and 5V to the base of Q601 to change G1 voltage. When in Power Saving Mode or when changing display modes, the CPU sends 0V to the base of Q601 to cut-off Q601 and Q602, and to make G1 voltage drop to -168V. Having -168V at G1 when power off, eliminates the bright spot at the center of screen and protects the CRT from phosphor burn. Having -168V at G1 while changing modes blanks the transient abnormal picture. VR605 (sub-bright) is to make fine brightness adjustments.

• ABL Circuit

The ABL circuit is used to limit the beam current of the CRT. A negative voltage, the level depending upon the beam current, is taken from pin 7 of the FBT and used to control the ABL circuit. When the brightness of the screen increases, the voltage drop across R624 increases (more negative) to make the voltage on test point

ABL drop and to decrease the gain of video amplifier.

• Power Supply Circuit

The power supply is a fly-back type switching power supply. The AC input is 90V~264V, 60 / 50Hz universal. The total output power can reach 200W.

• Output Voltages

| | | |
|--------|-------|--|
| 210.0V | ----- | for horizontal and Hi-voltage circuit |
| 190.0V | ----- | for video circuit |
| 29.5V | ----- | for vertical circuit |
| 12.0V | ----- | for horizontal control circuit video pre-amplifier |
| 6.0V | ----- | for heater |

• Control Circuit

I101 (3842A) is a PWM power supply control IC. The feedback signal is sent to pin 3 to control the duty cycle of its output (pin 6). When there is a circuit is short or overload somewhere in the system the large current through primary winding of T102 makes the peak voltage across R118 increase. This increased voltage is fed to pin 3 to shut down the power supply output.

• Feedback Circuit

The feedback voltage is picked up from the output of 12V and is fed to I103 (TL431). The photo-coupler, I102, is used to couple the feedback signal to control the duty cycle of I101 to stabilize the output voltage and maintain Primary-to-Secondary isolation.

• Power Saving Modes

There are three modes of operation for the AF3.0HD. These are ON and SUSPEND and OFF.

ON - Both horizontal and vertical syncs are present and the monitor is in normal

operation. The control signal from CPU is transmitted to the base of Q110 **SB** and R123 **SB₁** . When it is ON mode, CPU sends out 5V to test point **SB** and **SB₁** is saturated.

SUSPEND - Horizontal or Vertical sync is inactive per VESA spec.

When either no H-Sync or V-Sync input is present for 2 minutes the CPU sends out 0V to **SB** and forces Q110 into cut-off. The CPU also sends out 0V to CN905 Pin2 (PFC) and forces Q902 into cut-off. Thus the input voltage at I103 is increased and reduces the duty cycle of the output (Pin 6) of I101. Meanwhile, the point **SB** which is connected to the base of Q702, shuts down oscillation of the monostable I702. The output power in total system is less than 30W.

OFF - Both Horizontal and Vertical sync are inactive per VESA DPMS spec. for 10 minutes and all parts of the monitor are disabled including the CRT heater. UHD-3200 will stay off mode even when Horizontal and Vertical signals are active again. The power on/off switch must be switched to Off and then ON again to restart.

Power Consumption

| Mode | Power consumption |
|---------|-------------------|
| On | 200W |
| Suspend | < 30W |
| | < 5W |

LED Indication

| Mode | Power LED |
|---------|--------------|
| Normal | Yellow green |
| Suspend | Amber |
| Off | Off |

• CPU Circuit

I206 (7805) provides regulated 5V to the CPU circuit. There are 3 major components in this circuit: I201 (CPU), I202 (24C16) and IC204 (24LC21). The CPU detects the input signal at pin 17 (H-sync) and pin 18 (V-sync). When one of them is missing the CPU sends a LOW signal out of pin 11 **SB** . When both syncs are present, the CPU checks the frequency and polarity and asks I202, according to this timing, to send out the data to control the parameters of the monitor. This data, including H/V size, H/V position, pincushion and Keystone, has auto-sizing and auto-position for all of the different timings. The CPU will detect the external control keys all the time and relay the data modification to all of the circuit to meet the adjustment that is made by the user. The external control functions include H/V size, H/V position, pincushion, Keystone, rotation, R-Gain, G-Gain, B-Gain, Degaussing, Contrast and Brightness. I204 (24C21) is used for DDC1/2B.

- **Rotation Circuit**

The Rotation Circuit contains transistors Q201~Q203 and Q208~Q210. The CPU sends a DC control signal to the base of Q201 to change the amount and polarity of the current through the rotation coil. When there is current through the rotation coil, the picture on the screen will be rotated according to the amount and polarity of this current.

CRT Board

- **Video Circuit**

I801 (MC13282EP) contains the video pre-amplifier, DC Contrast control and separate R, G and B gain control. The input voltage level at pin 2, pin 4 and pin 6 is 0.7 Vp-p. The contrast voltage supplied by I802, is fed to pin 12 to control the video gain. Meanwhile the ABL voltage, from the FBT, is used to limit the video gain when a large beam current is present in the CRT. I802 Pins 14, 23 and 24 are used to adjust the video gain separately to achieve the video white balance on the screen.

The output of I801 (pin 15, pin 19 and pin 22) is fed to output amplifiers. The output video signals are coupled to the cathode through capacitors. DC clamp circuit, which follows by the video output, provides the individual black level for 3 guns R, G and B. I802 Pins 1, 2, 13 are used to adjust the background white balance for the CRT.

- **OSD Circuit**

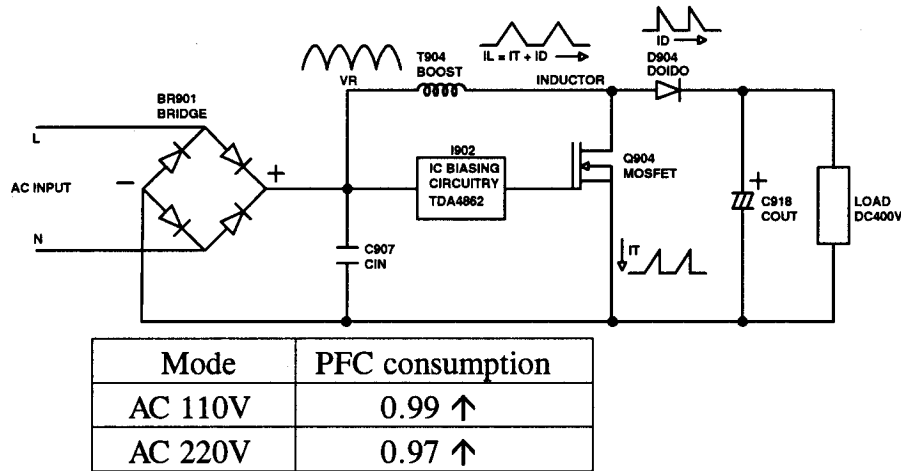
I802 contains R, G, B Blanking generator, DC Contrast Control, R, G, B gain control, and R, G, B cut-off control.

PFC and Audio Board

- **Power Factor Control Circuit**

1. Power Factor pre-converter for lamp ballast and switched mode power supplies with wide input voltage Range.
2. The main characteristics of this topology (see block diagram) are:
 - Continuous input current, easing the FRI/EMI filtering problems.
 - More effective energy storage in the output capacitor due to the regulated output DC voltage (higher than the maximum input voltage).

3. CONTROL BOOST PWM up to 0.99PF



• Full Wave Rectifier

The AC input voltage is fed to BR901, full wave rectifier, to provide DC voltage across C104 and C907.

• Degaussing Circuit

It is composed of RT901, RL901 and Q901. When the power switch is on or the degauss switch is pressed, the degaussing circuit will be active.

• Audio Circuit

• Power Supply Circuit

The power supply is a self-driving fly-back type switch power supply. The DC input voltage is from main board.

- Output Voltages
 - 20V ----- for audio power amplifier circuit
 - 5V ----- for CPU/OSD circuit
- Control Circuit

The fly-back signal from the photo coupler (I904) is sent to Q906 to control the on-off duty cycle. When circuit is short or overload somewhere in the system, the large current through primary winding of T905 makes the peak voltage across R935 increase. The increase in voltage fed to Q906, shuts down the power supply output.

• Audio Signal Amplify Circuit

- Volume Control Circuit
 - I908 (UPC 1406HA) is a dual attenuator. The controlling DC level is sent to Pin 2 and Pin 8 from the CPU.
- Mute Circuit
 - It is composed of Q913 and Q914. When Mute is active. The Audio signal

of I908 at Pin3 and Pin7 will be connected to ground.

- **Audio Amplifier**

I913 (TDA7263) is a dual audio power amplifier, it's close loop gain about 35db.

- **BBE Sound Processor**

I912 (BA3884S) is a sound enhancement audio processor which regenerates high definition and true clear sound. It includes BBE on/off switch and variable boost control in low (bass constituent) and high (BBE process) band.

| IC912(Pin8) | BBE mode | BBE Process (10KHz) |
|-------------|----------|---------------------|
| 0V~5V | On | 9.5db(Max)~0db(Min) |
| 7V~10V | Off | |

| IC912(Pin7) | Bass constituent Boost (100Hz) |
|-------------|--------------------------------|
| 0V~5V | 8.5db(Max)~0db(Min) |

Sync Board

- **YPbPr selector**

Two BNC YPbPr inputs, through ferrite cores, are fed into IC04, BA7657S. IC04 and its peripheral circuitry provide two functions for input sources YPbPr1 and YPbPr2. First, they are used for an analog switch to select one of two input sources. When Pin16 (CTL) is high, the output from IC04 (Pin21=Y, Pin19=Pb and Pin15=Pr) will be YPbPr1. When Pin16 is low, the outputs from IC04 will be YPbPr2. Secondly, the output of Y (Pin21) is also fed into Pin18 to a synchronization separation circuitry. The synchronization separation circuitry is used to output the synchronization pulses after separating them from the composite Y signal (sync on Y). The composite sync pulses can be obtained at Pin17 of IC04.

- **YPbPr to RGB matrix**

Pr and Pb, which are from IC04, are AC - coupled at Pin4 of IA01 and IA02 (MC1496) via components RA86 CA32, RA84 and CA42.

IA01, IA02 and their peripheral components, form a double balanced differential amplifier. They are designed for the conversion of the signals Pb and Pr into Y-R, Y-B and Y-G. The analog signal for color control, which is from CPU, is to control the gain of double balanced differential amplifier. The signal for color selector, which is from CPU, and relay RLA01 are to select for the different colorimetry between 480P and 720P or higher resolution. The outputs of double balanced differential amplifier Y-R, Y-B, Y-G are fed into the bases of transistor QA01, QA11 and QA21. Y, which is output from IC04 Pin21, is fed into the bases

of QA03, QA13 and QA23. 15 transistors (QA01-QA05, QA11-QA15, and QA21-QA25), 20 resistors and 3 peaking coils comprise three Subtractor circuits that perform $Y - (Y - R) = R$, $Y - (Y - G) = G$, $Y - (Y - B) = B$.

R, G and B are output at the emitters of QA05, QA15 and QA25.

• More analog switches

There are three sources of RGB to be selected. These are RGB from YPbPr, RGB from RGBHV and RGB from the line doubler PCB. Two analog switches IC02 and IC03 (BA7657S) are used for selecting one of three input sources for output video amplifier on CRT PCB.

IC02 is to select one of two input sources: RGB from YPbPr and RGB from RGBHV. When pin16 is High the output will be RGBHV, when pin 16 is Low the output will be from RGB from YPbPr. IC03 is to select one of two input sources: RGB from IC02 and RGB from the line doubler PCB. When pin16 is High the output will be RGB from IC02, when pin 16 is Low the output will be RGB from the line doubler PCB.

• Audio switch

Multiplexer IC05, 4052, is used for the audio switch to select one of the four input sources from YPbPr1, YPbPr2, RGBHV and the line doubler PCB.

A signal from the CPU appears at two control pins, pin9 and pin10, to select one of these four input audio sources.

• Mask circuitry

IB01 (M62393) is a DAC that converts the signals from digital to analog. It's I²C inputs SCL and SDA carry the control signal to control the output DC voltages at Pin6 (BBE-LOW), Pin7 (BBE-PROCESS) and Pin12 - Pin15 (MASK circuitry).

IB03 and IB05 (4538) are designed to be 4 one-shot multi-vibrators (monostable) Horizontal retrace pulses are fed at Pin4 and Pin11 of IB03 to trigger the monostables for left and right masking. Vertical retrace pulses are fed at Pin4 and Pin11 of IB05 to trigger monostables for top and bottom masking. Four DC voltages appearing at pins12 through 15 of IB01 are fed into IB02 and IB04 through QB01, QB02, QB11 and QB12 to control the high-level duty of output pulses from IB03 and IB05 as follows:

The right mask pulse appears at pin9 of IB03

The left mask pulse appears at pin6 of IB03

The bottom mask pulse appears at pin9 of IB05

The top mask pulse appears at pin6 of IB05

These four mask pulses, via buffer transistors QB07, QB03, QB09 and QB08, are used to mask the video on the screen.

• RS232 serial port

IB06 (ICL232) is used by the CPU to communicate with an outside device so that it can control monitor parameters through the RS232 serial port.

Line Doubler Board

Video decoder SAA7111A (U1) is a universal programmable device which converts the analog CVBS or Y/C input signal to a digital YUV output and it also handles luminance and chrominance signal processing including that for NTSC, PAL, and SECAM.

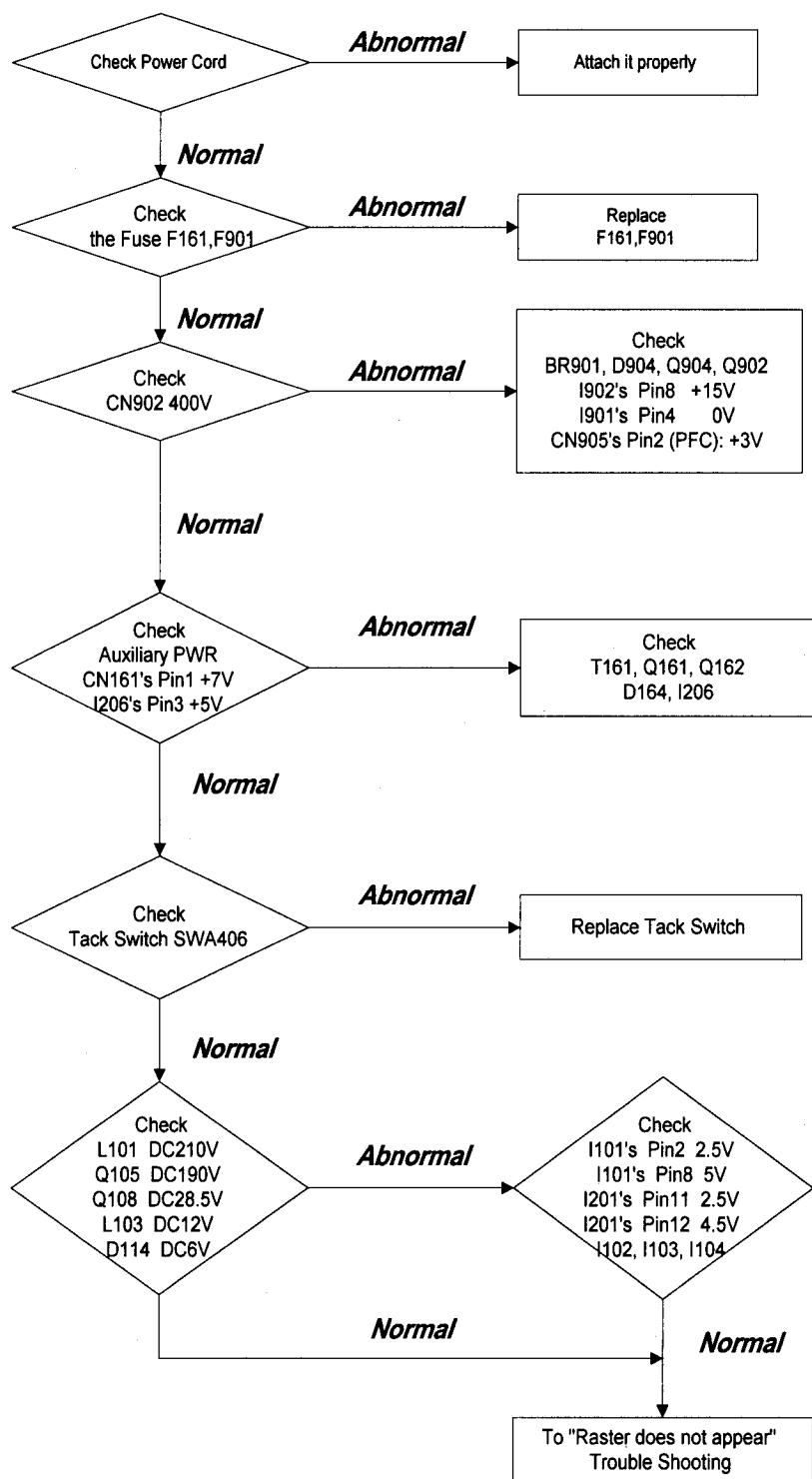
SAA7111A can accept two inputs that are the CVBS input and the Y/C input from SVHS source. The digital output stream of SAA7111A is buffered by two GCS83LB01 (U2, U3) which is 910 x 8-bit line buffer. The line buffer will convert the input signal from 15.75kHz to 31.5kHz by doubling the line frequency. IC's 74HC161 (U6, U9), 74HC74 (U7) and GAL (U8, U11) generate the suitable timing control for the line buffer. The output stream from the line buffer is fed to DAC CH8438A (U4) which will convert the YUV digital video stream to an analog RGB output, that will go through to the monitor. The CH8438A also accepts an auxiliary analog RGB input that can be switched to a VGA input. Closed caption is processed by SAA5252 (U16) The CPU controls SAA7111A, CH8438A, SAA5252 and STV9425 through I²C bus programming. I²C is a two wire series bus for easy connection.

The CPU accepts remote control commands from the monitor through PCF8574A (U19) which translates the I²C signal to a parallel signal for the CPU, the CPU then outputs a control signal to the monitor to switch the input signal source. The audio source also controlled by the CPU through CD4052 (U18) that selects one of the four input audio sources.

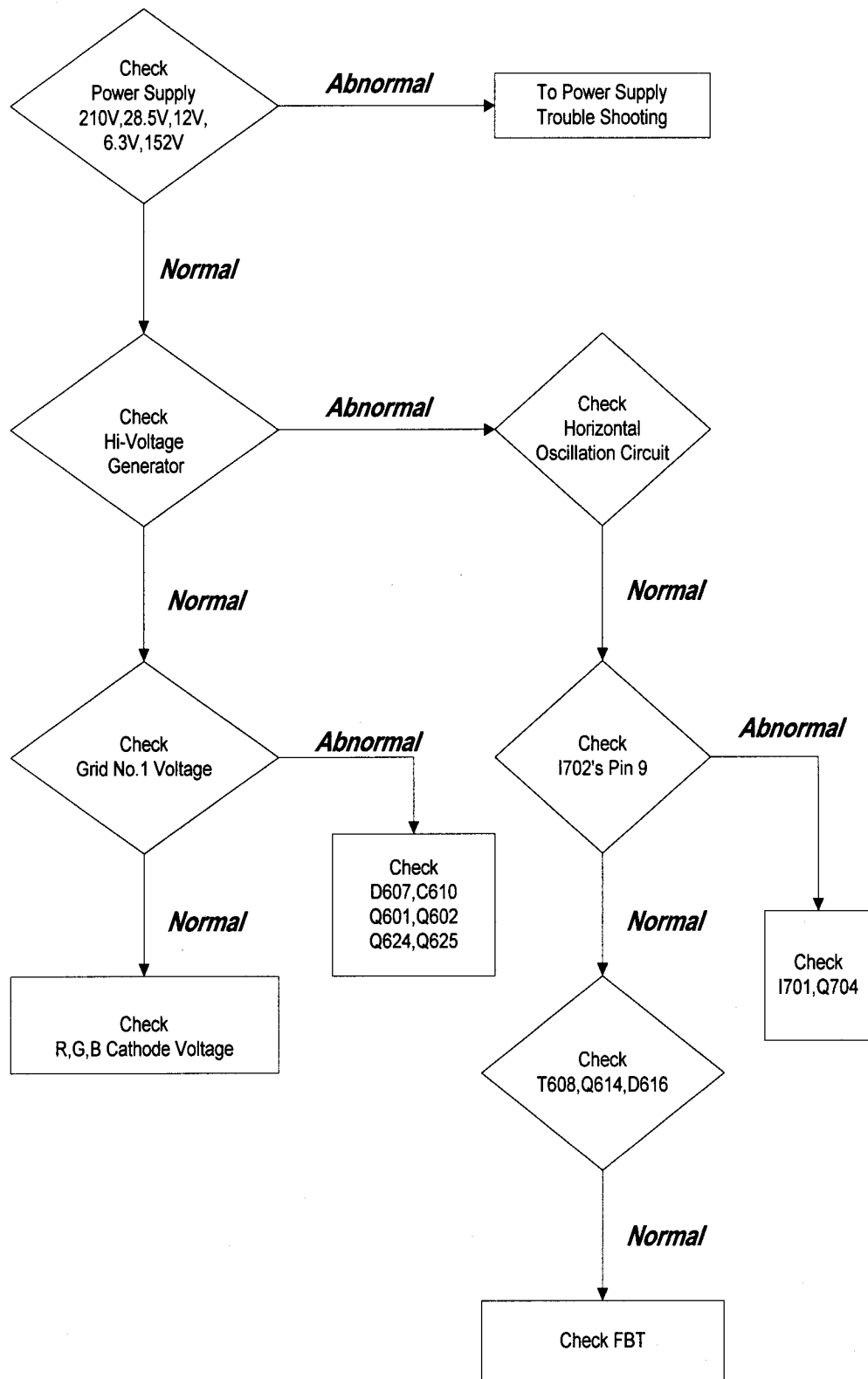
The 7805 (U12) is a voltage regulator for the 5V supply, the LM317 (U20) is for the 3V supply, and U5C, C34, D3, D1 and C35 generate a -5V supply for CD4052 and 74HC4053. The diode and zener diode around the I/O connector are for ESD protection.

Trouble Shooting Guide

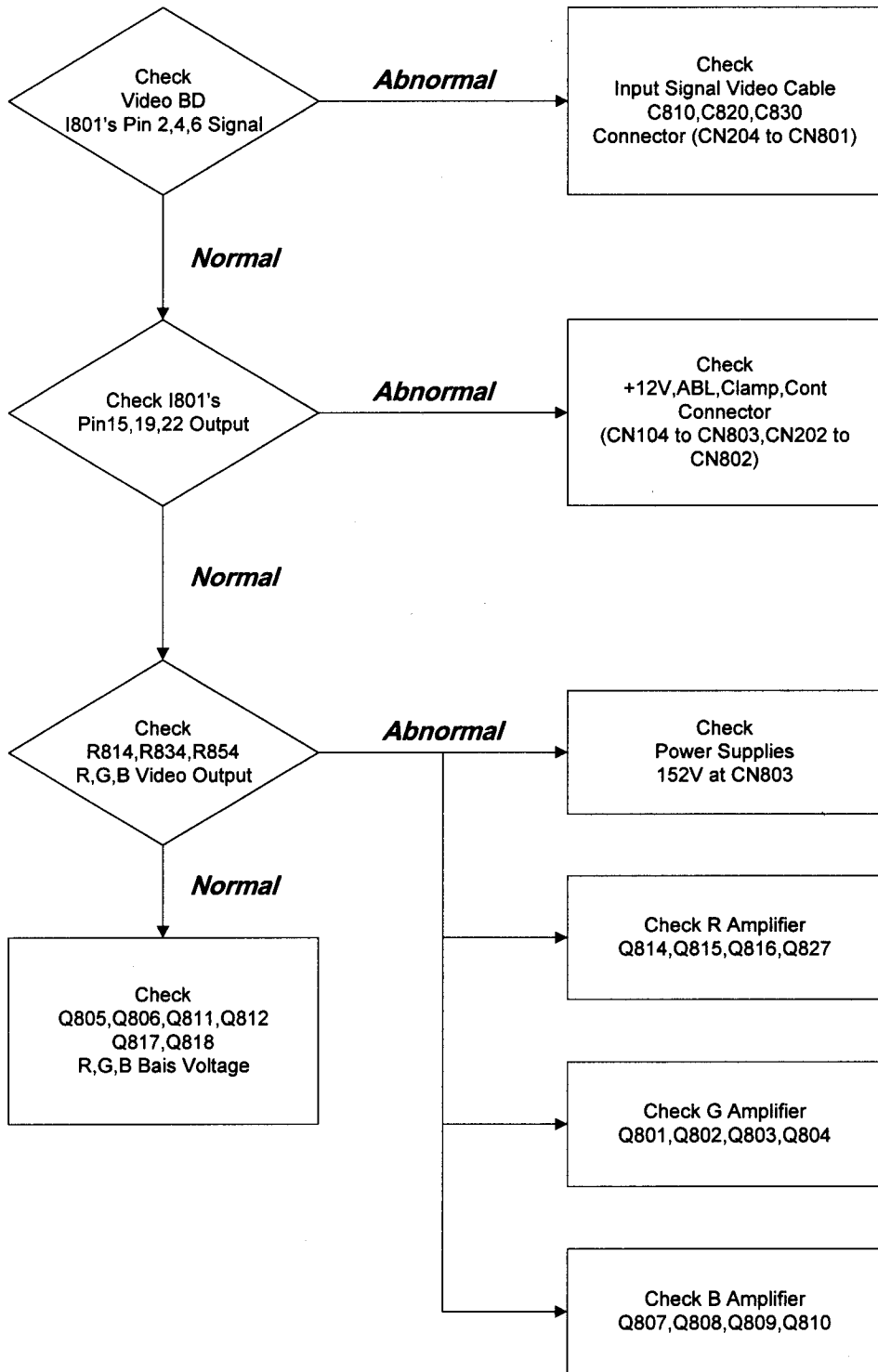
no Power



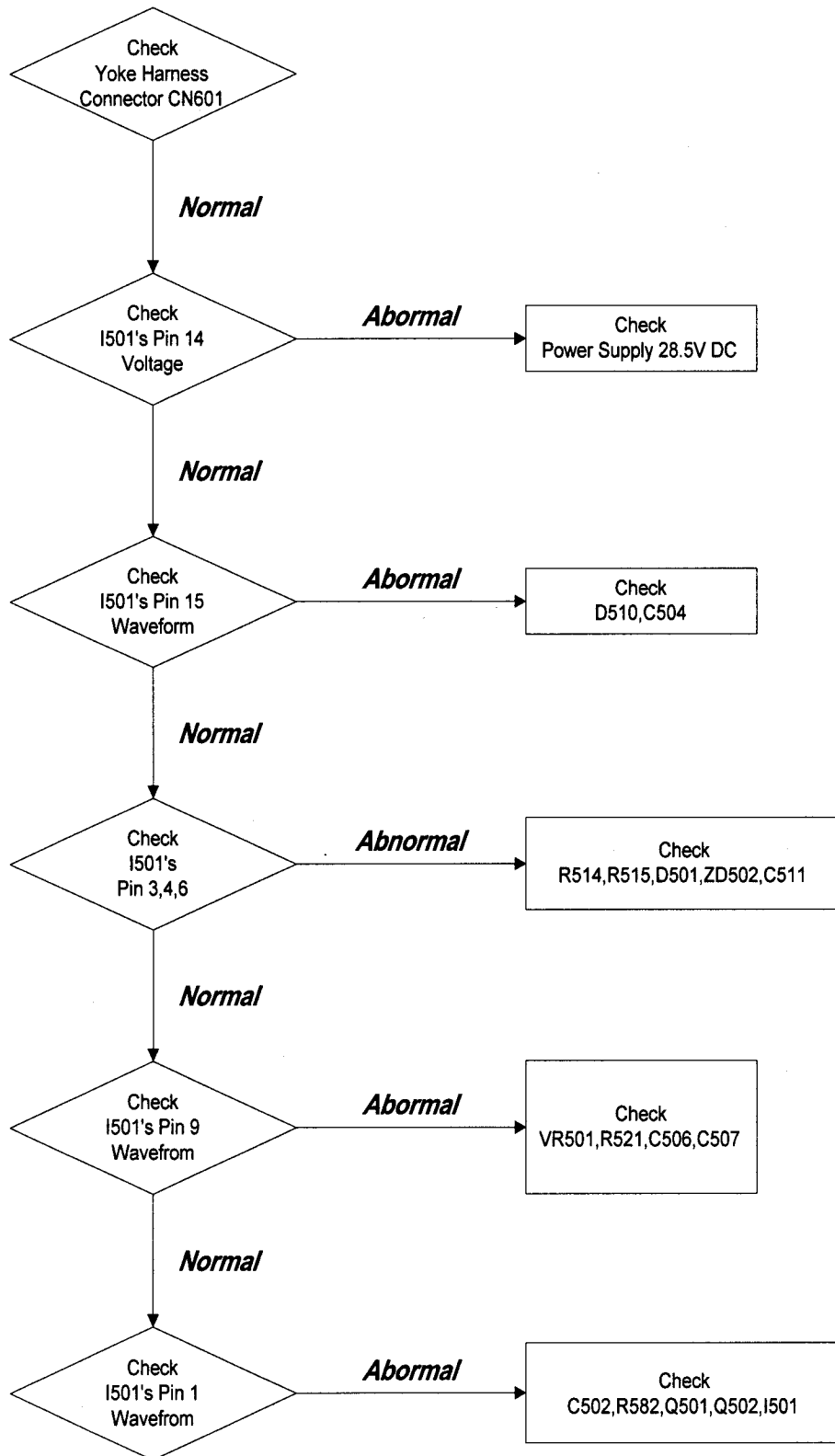
Raster does not appear



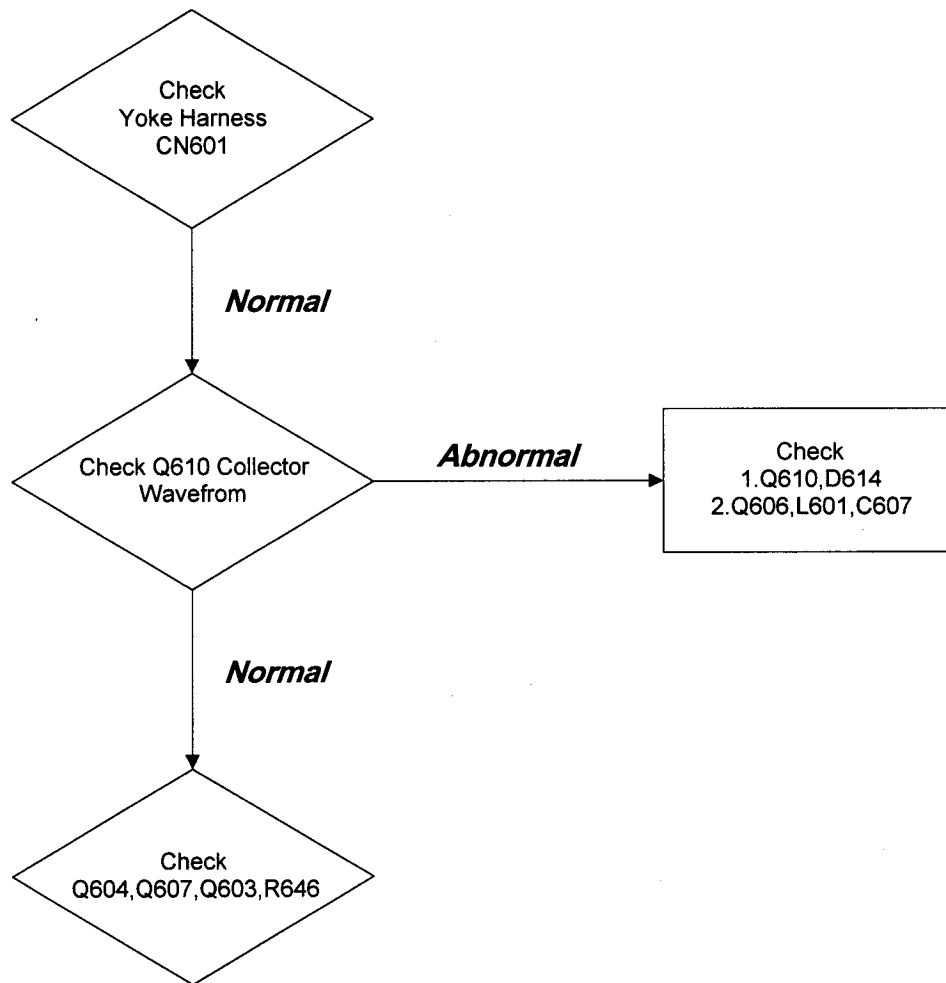
Video no R,G,B Color



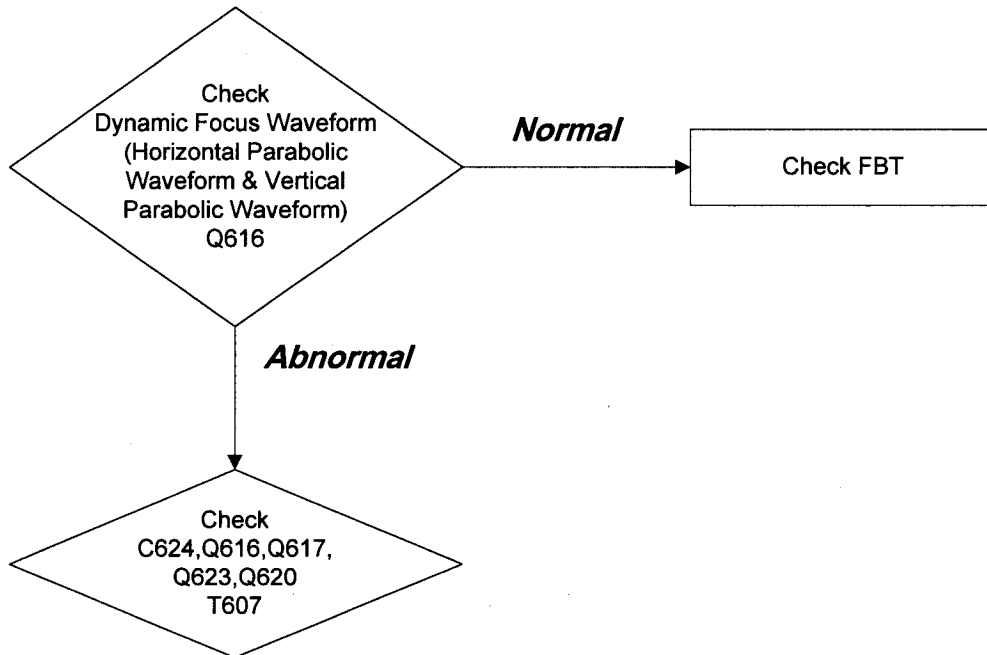
Single Horizontal Line



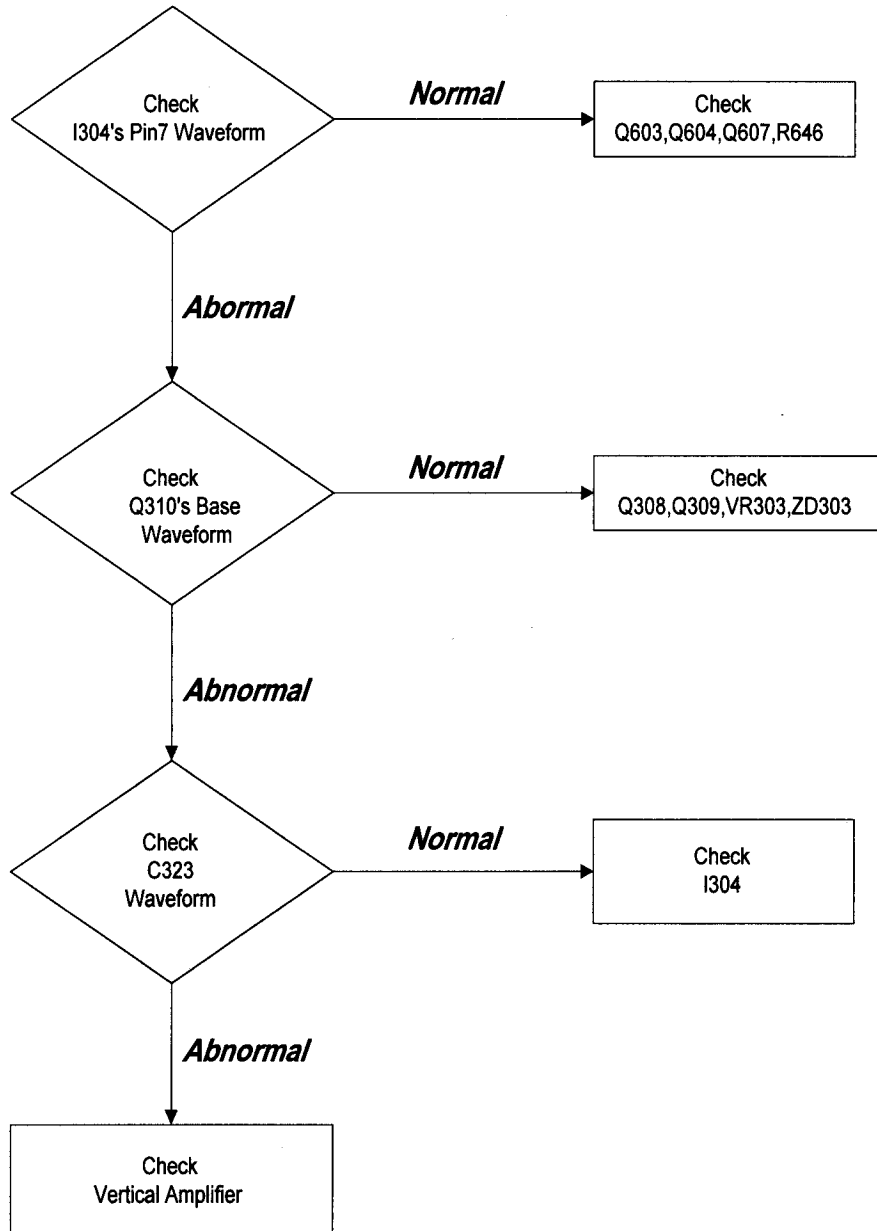
Single Vertical Line



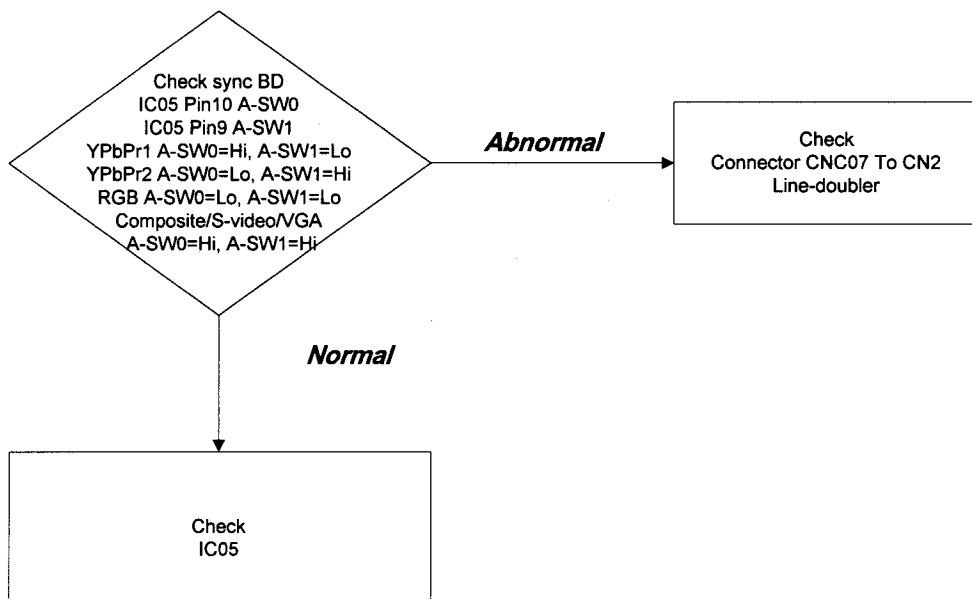
Dynamic Focus Fail



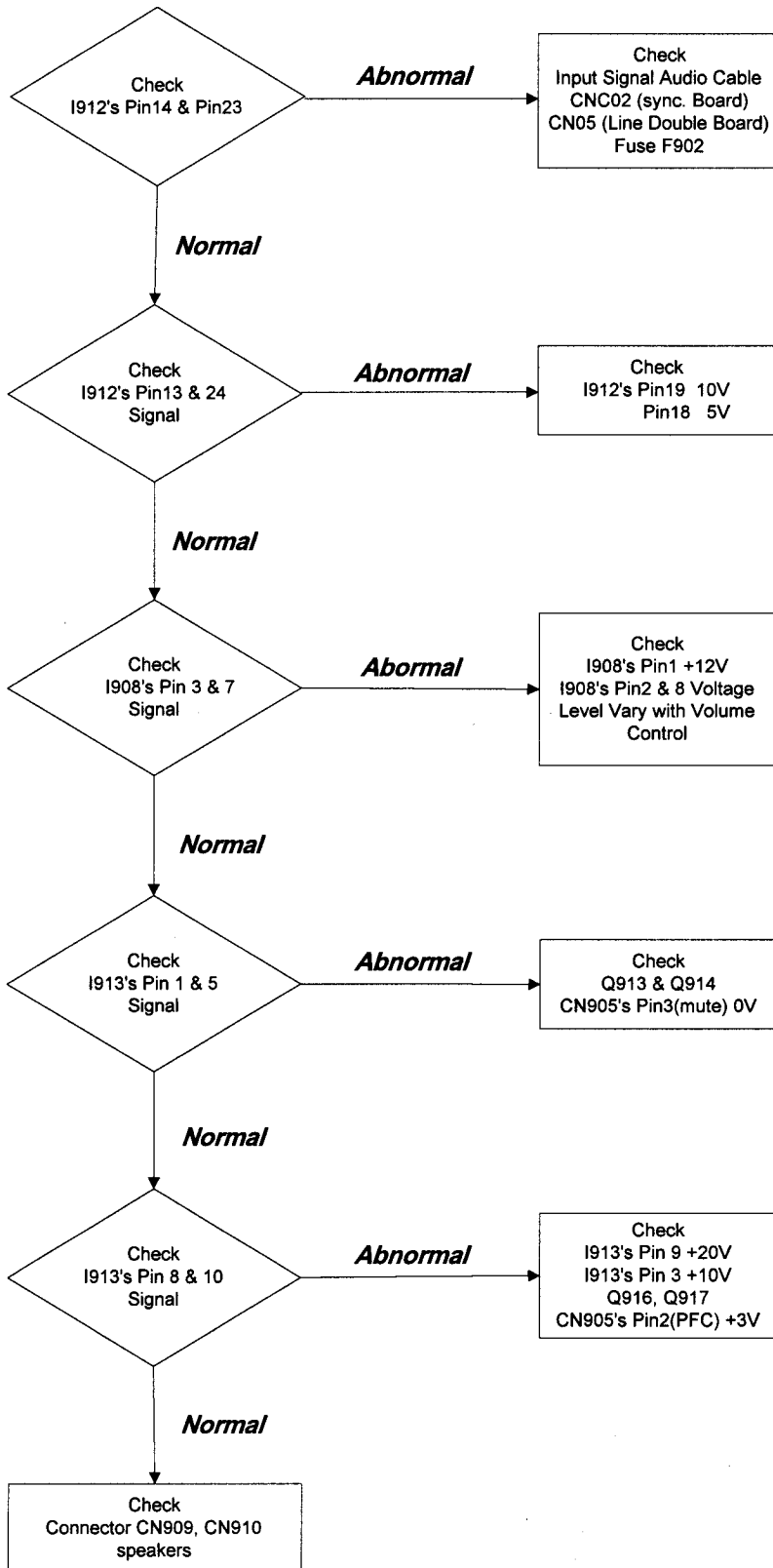
Pincushion Distortion



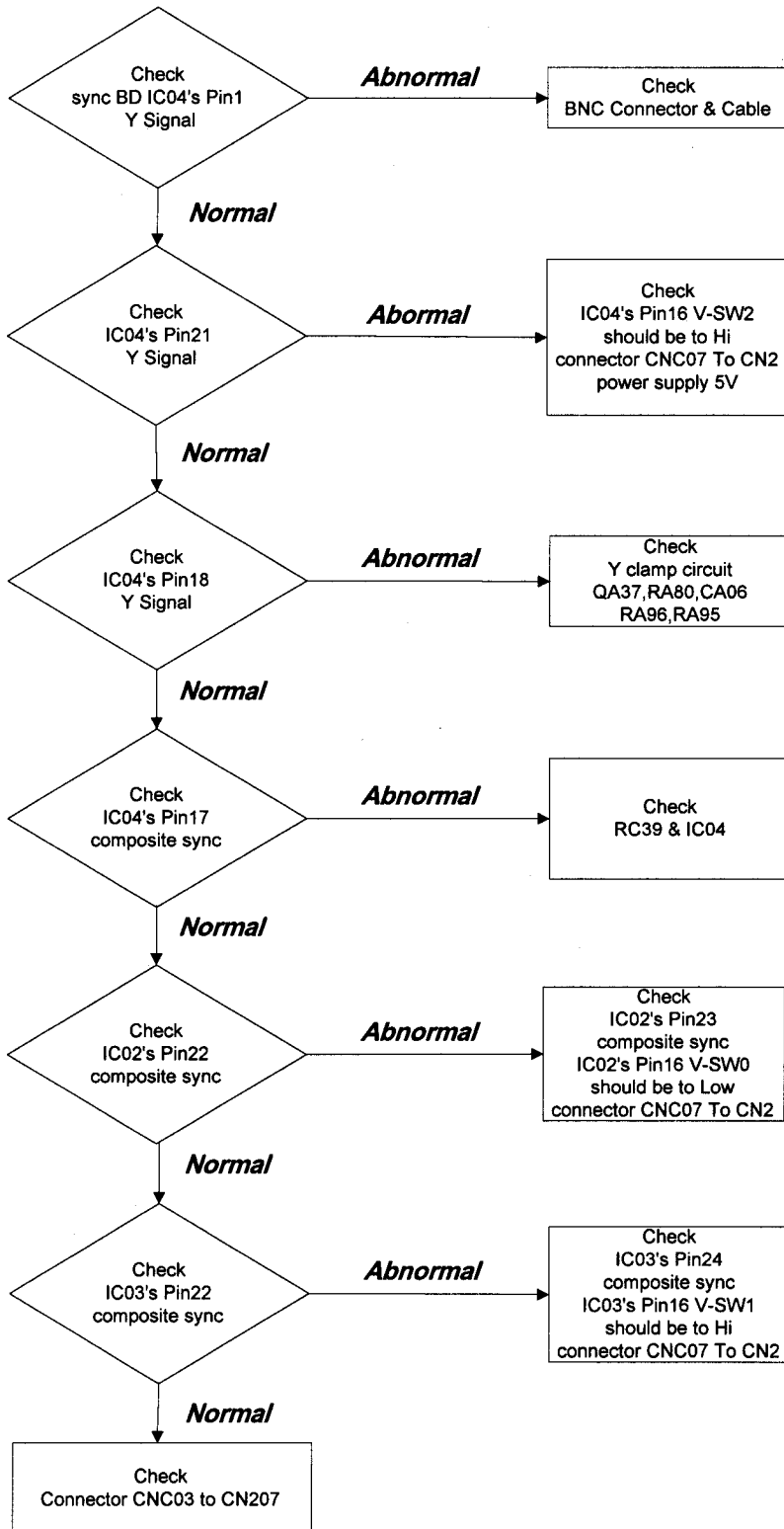
Wrong Audio Source



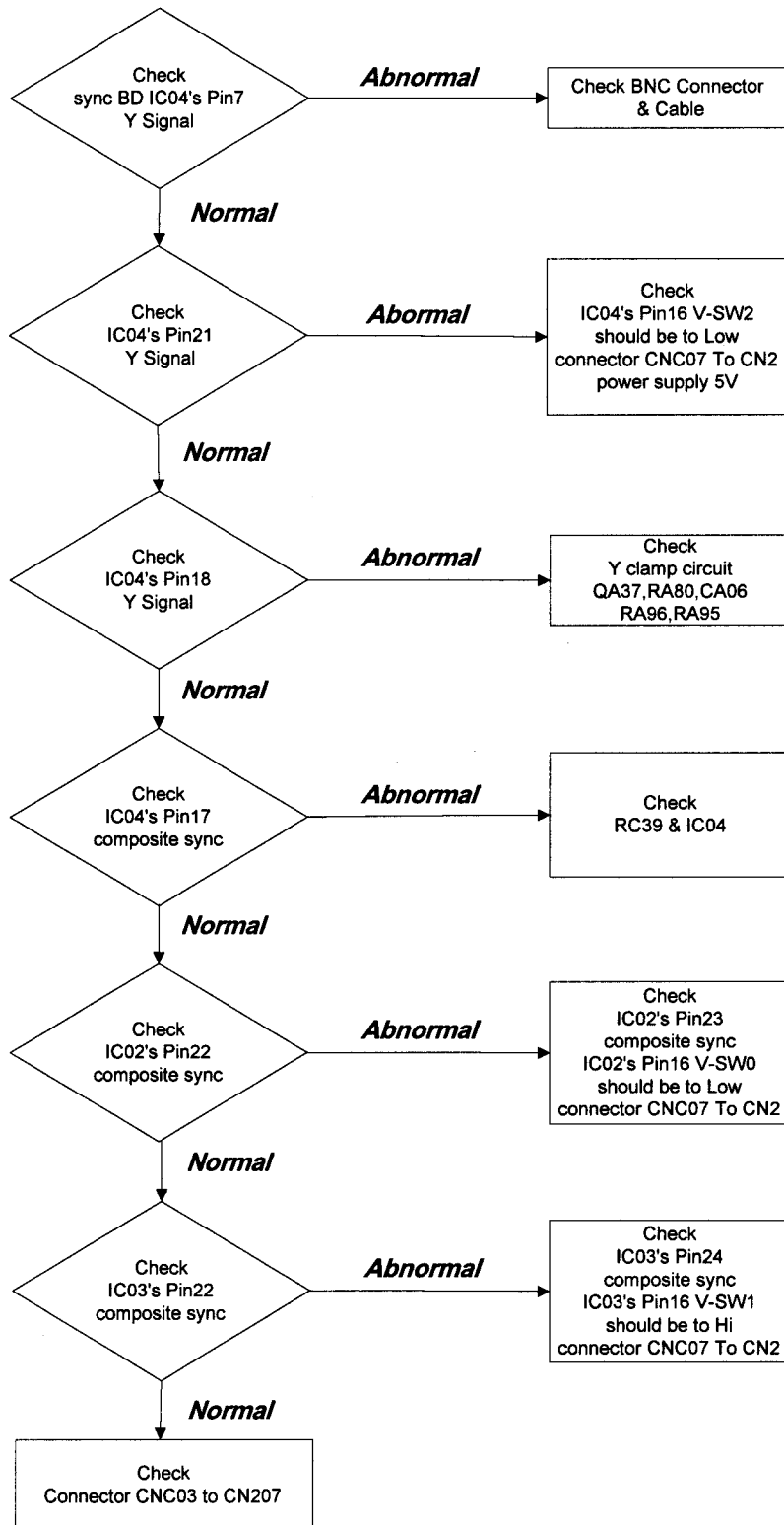
No Sound



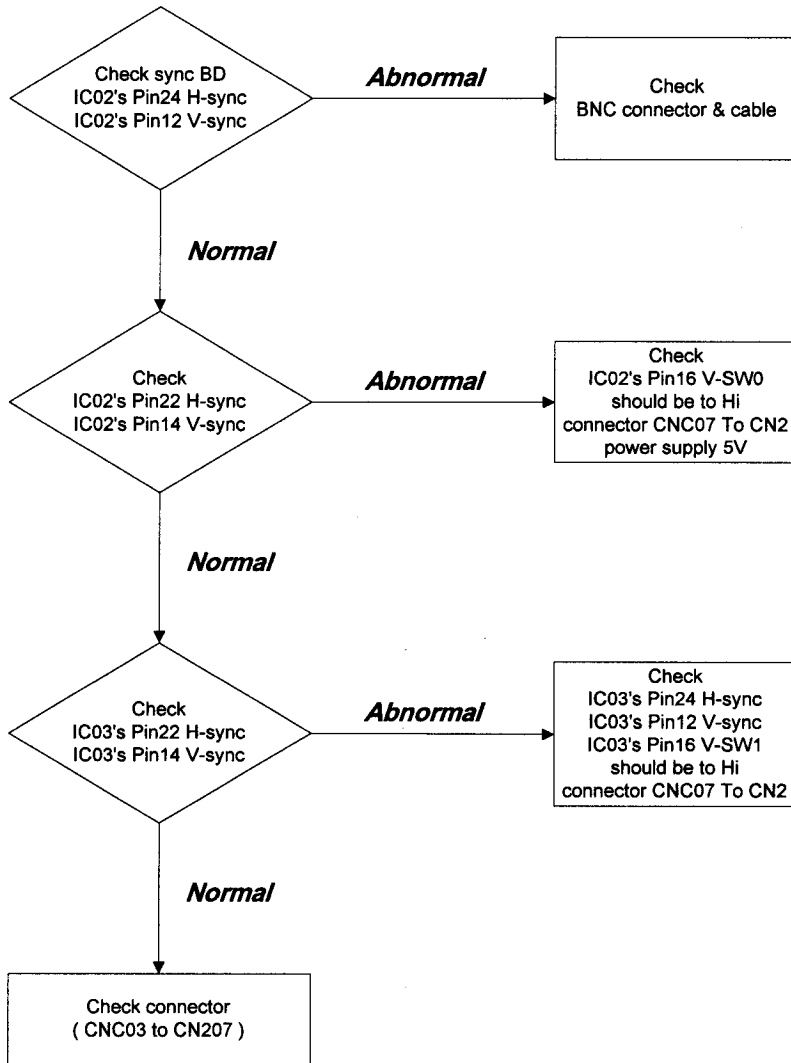
No Signal on YPbPr1



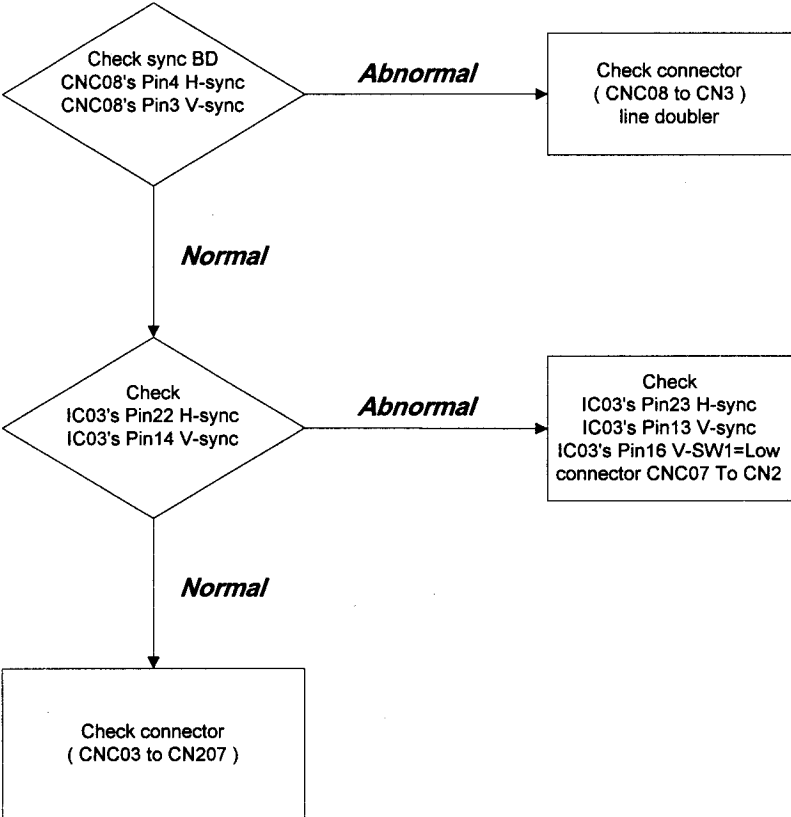
No Signal on YPbPr2



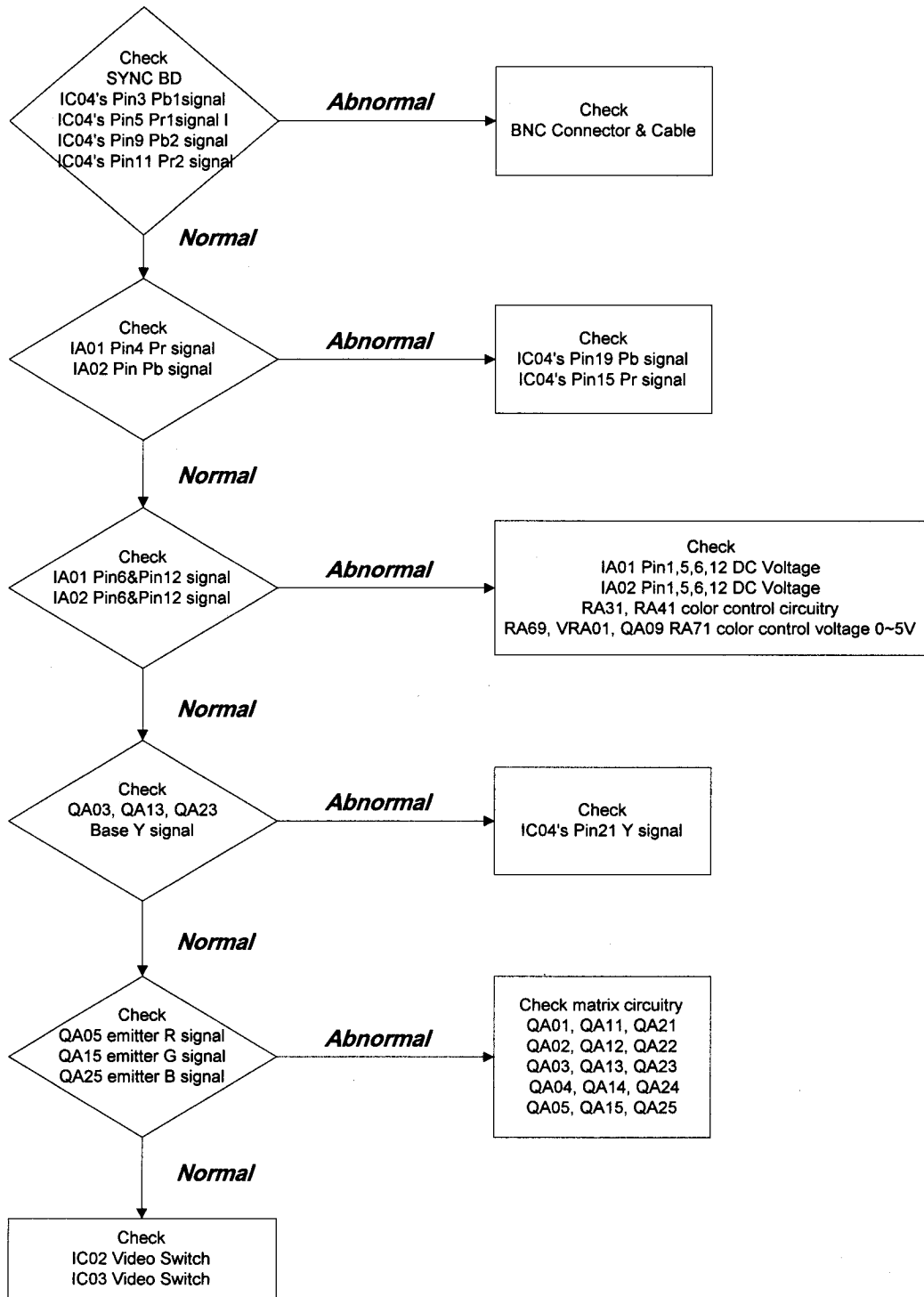
No Signal On RGB



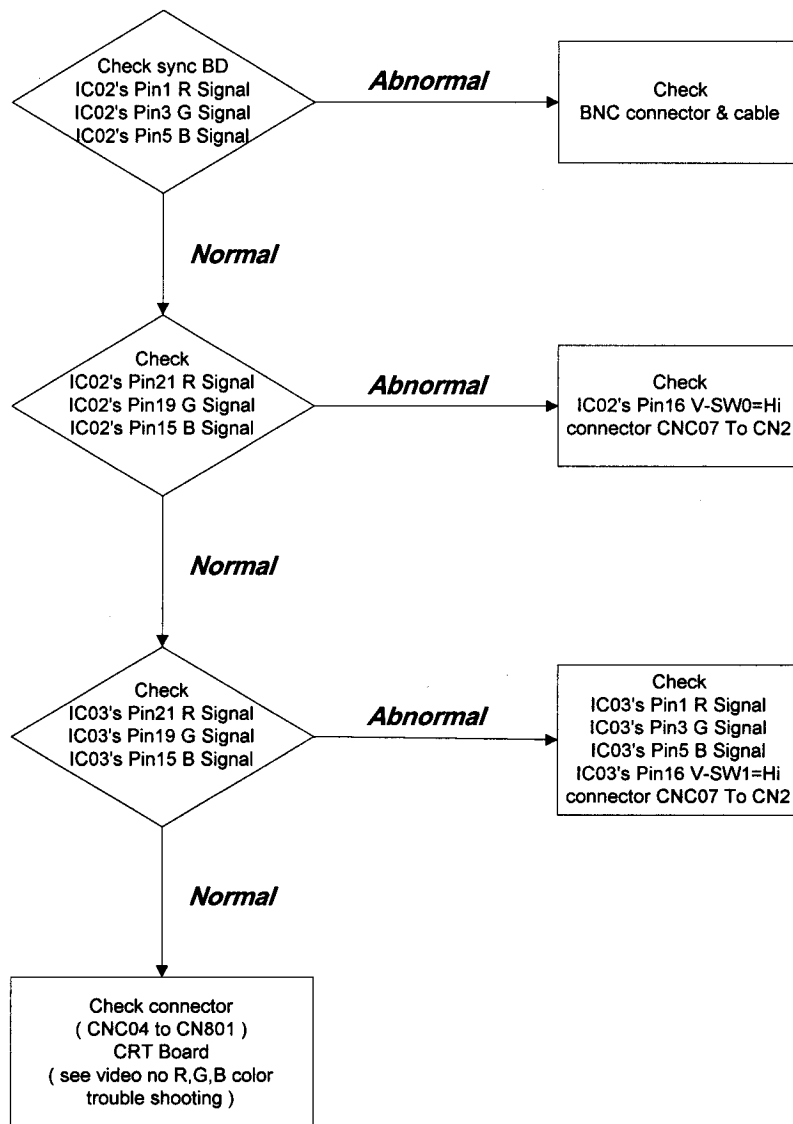
No Signal On Composite/S-Video/VGA



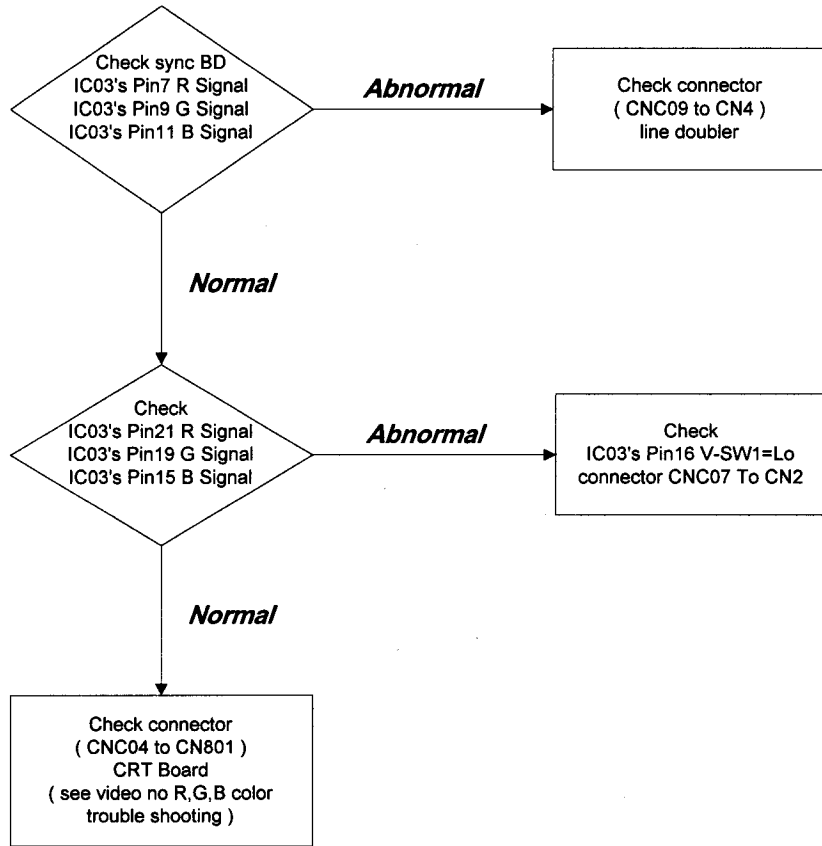
Wrong Color on YPbPr1/2 Source



To Lack R,G,B Color On RGB Source



To Lack R,G,B Color On Composite/S-Video/VGA Source



Detailed Alignment Procedure

- ※ Any adjustment should be made after 30 minutes warm-up.
- ※ CRT should face east.

• Adjustment of HI-voltage

- Source input at VGA Mode
- Input 480P (H=31.469kHz, V=60Hz) cross-hatch pattern.
- Aspect ratio at 1.77 mode.
- Set Brightness Control at maximum.
- Set Contrast Control at maximum.
- Adjust VR602 to increase Hi-voltage to X-ray trigger point $32\pm 1.5KV$.
- The Hi-voltage should be cut-off.
- Switch power off.
- Adjust VR602 back for reduced Hi-voltage setting.
- Switch power on again.
- Adjust VR602 to set Hi-voltage to $29\pm 0.3KV$.

• Adjustment of Picture Geometry for Computer Mode:









List of VR for Adjustment

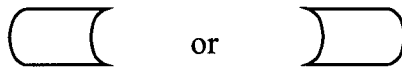
| | |
|-------------------|------------|
| Background Center | V-Lin |
| Sub H-size | Sub V-size |
| Sub Side-pin | Keystone |
| Bow/Tilt | S-symmetry |

Method

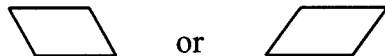
- Source input at VGA Mode.
- Input 1080I (H=33.750kHz, V=60Hz) cross-hatch pattern.
- Aspect ratio at 1.77 mode.
- Adjust VR601 to set the background raster at the horizontal center.
- Input 480P (H=31.469KHZ, V=60HZ) cross-hatch pattern.
- Adjust VR501 to set the picture to have identical vertical size on the upper and lower area.
- Use external keys on the bezel to enter the Preset Mode Setting (First, press

“Menu” key to make OSD appear, then press “Menu” key again until OSD ICON disappear, but this time don’t release “Menu” key. Then press “+”, until Preset Mode OSD Icon appear.) and adjust the external control H-phase to set the video picture at the center of background.

- Adjust external Control Rotation (  ) to have a good position.
- Adjust external Control Side-Pin () at DAC = 80±5.
- Adjust VR303 to just have a barrel picture on the screen.
- Adjust external Control Side-Pin to have a good picture.
- Adjust external Control Keystone () to have a good picture.
- Adjust external Control H-size () at DAC = 120±5.
- Adjust VR603 to have H-size just over-scan.
- Adjust external Control V-size () at DAC = 130±5.
- Adjust VR502 to have V-size about 20mm over-scan.
- Adjust external Control V-size () at over 1/4 gille.
- Adjust VR304 to avoid the video picture from occurring distortion :



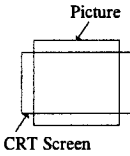
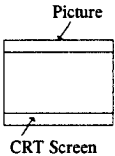
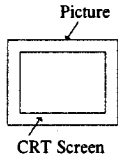
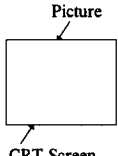
- Adjust VR302 to avoid the video picture from occurring distortion :



• Preset Mode Alignment

• Aspect Ratios

- Before enter the Preset Mode Setting, please make sure the Monitor is in the VGA Mode.
- Use external keys on the bezel to enter the Factory Preset Mode Setting (First, press “Menu” key to make OSD appear, then press “Menu” key again until OSD Icon disappear, but this time don’t release “Menu” key. Then press “+”, until Preset Mode OSD Icon appear.).
- Press FUNCTION “◀” and “▶” buttons to choose H-size, H-phase, V-Position, Pincushion and Rotation function. Then adjust each function and making sure that its geometric condition compliant with the specification as follows:

| 1. Display size | 1.33 | 1.66 | 1.77 | Anamorphic |
|---|---|---|---|---|
| |  |  |  |  |
| Horizontal Size | 510± 5mm | * Full scan± 5mm | 1/4 grille overscan ± 1/4 grille | *Full scan± 5mm |
| Vertical Size | 1/4 grille overscan ± 1/4 grille | 1/4 grille overscan ± 1/4 grille | 1/4 grille overscan ± 1/4 grille | Full scan± 5mm |
| * For 1080I, cannot see the left and right edge lines | | | | |

- Check the other preset timings to see their geometric condition are compliant with the specification.
- Press “Menu, “ + “ keys simultaneously to complete preset mode alignment.

• Adjustment of White Balance

For the raster

- **6500K Mode : (In normal condition)**
 - Before entering the Preset Mode Setting, please make sure the Monitor is in the VGA Mode.
 - Input 480P (H=31.469kHz, V=60Hz) dark pattern.
 - Set aspect ratio at 1.77 mode.
 - Use external keys on the bezel to enter the Factory Preset Mode Setting (First, press “Menu” key to make OSD appear, then press “Menu” key again until OSD Icon disappear, but this time don’t release “Menu” key. Then press “ - “, until Preset Mode OSD Icon appear.).
 - Set the Brightness and Contrast Controls at maximum.
 - Set the G-cutoff at DAC = 127
 - Adjust G2 VR, which is on the FBT, and VR605 (for fine compensation), normally at center, to obtain the brightness reading:
- You can use FUNCTION “ + ” and “ - ” buttons to adjust Raster to set the background specification at:

$$Y = 0.2 \pm 0.2 \text{ fl}$$

$$Y = 0.2 \pm 0.2 \text{ fl}$$

$$y = 0.329 \pm 0.005$$

$$x = 0.313 \pm 0.005$$

• **5400K/CUSTOMER Mode : (In normal condition)**

- Before entering the Preset Mode Setting, please make sure the Monitor is in the VGA Mode.
- Input 480P (H=31.469kHz, V=60Hz) dark pattern.
- Set aspect ratio at 1.77 mode.
- Use external keys on the bezel to enter the Factory Preset Mode Setting (First, press “Menu” key to make OSD appear, then press “Menu” key again until OSD ICON disappear, but this time don’t release “Menu” key. Then press “ - “, until preset Mode OSD Icon appear.).
- Set the Brightness and Contrast Controls at maximum.
- Adjust G-cutoff to obtain the brightness reading:

$$Y = 0.2 \pm 0.2 \text{ fl}$$

- You can use FUNCTION “ + ” and “ - “ buttons to adjust Raster to set the background specification at:

$$Y = 0.2 \pm 0.2 \text{ fl}$$

$$y = 0.343 \pm 0.005$$

$$x = 0.335 \pm 0.005$$

For the gain

• **5400K/CUSTOMER Mode :**

- Input 480P (H=31.469kHz, V=60Hz) small window pattern.
- Set the Brightness and Contrast Controls at maximum.
- You can use FUNCTION “ + ” and “ - “ buttons to adjust Contrast, R-Gain, B-Gain, G-Gain to have white balance specification at:

$$Y = 80 \pm 3 \text{ fl}$$

$$y = 0.343 \pm 0.005$$

$$x = 0.335 \pm 0.005$$

- Press “Menu”, “ - “ keys to complete white balance alignment.

• **6500K Mode :**

- Input 480P (H=31.469kHz, V=60Hz) small window pattern.
- Set the brightness.
- Set aspect ratio at 1.77 mode.
- You can use FUNCTION “ + ” and “ - “ buttons to adjust R-Gain, B-Gain, G-Gain to have white balance specification at:

$$Y = 80 \pm 3 \text{ fl}$$

$$y = 0.329 \pm 0.005$$

$$x = 0.313 \pm 0.005$$

- Input 480P (H=31.469kHz, V=60Hz) full white pattern.
- Adjust VR604 to obtain the brightness reading:

$$Y = 25 \pm 2 \text{ fl}$$

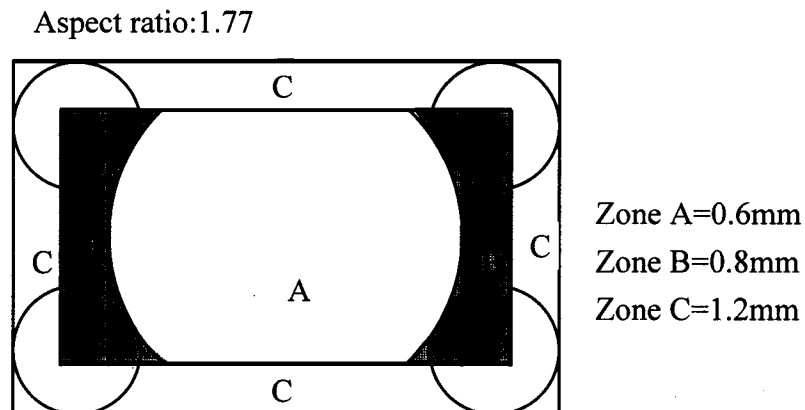
• YPbPr Color

- Before adjusting the YPbPr color Gain, please make sure the Monitor is in the YPbPr Input mode.
- Input 480P (H=31.469kHz, V=60Hz) color-bar pattern.
- Use external keys on the bezel to select the “COLOR YPbPr” function and adjust to minimum.
- Adjust VRA01 until the color just disappears.

• Focus Regulation

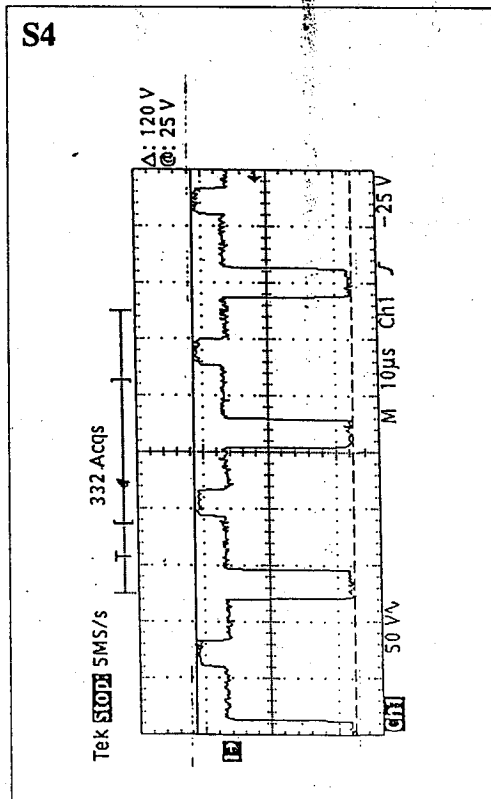
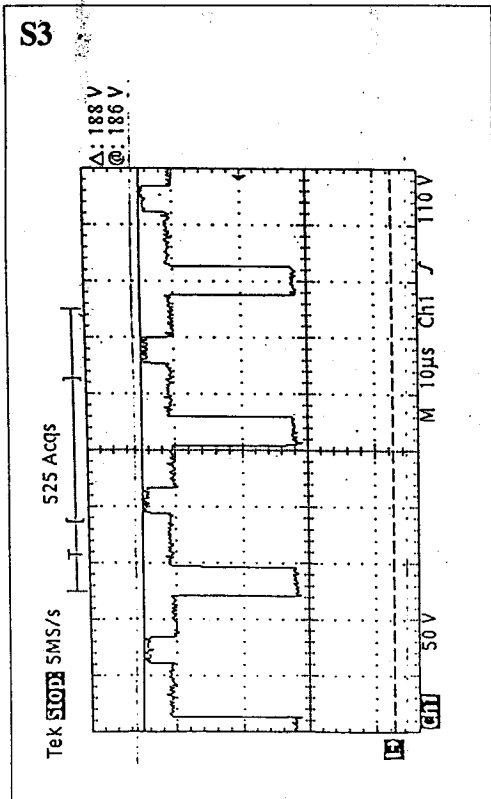
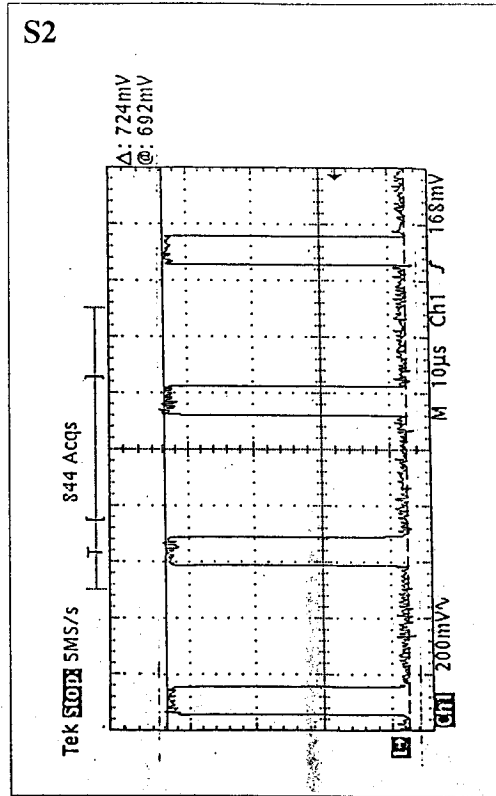
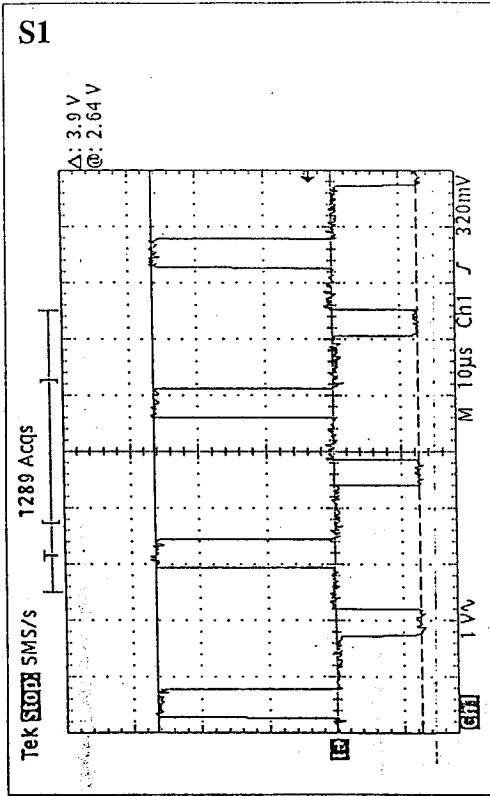
- Input 480P (H=31.469kHz, V=60Hz) cross-hatch pattern.
- Adjust VR2, which is on the FBT, to for the sharpest vertical lines and adjust VR801, which is on CRT Board, to for the sharpest horizontal lines.

• Dynamic convergence regulation

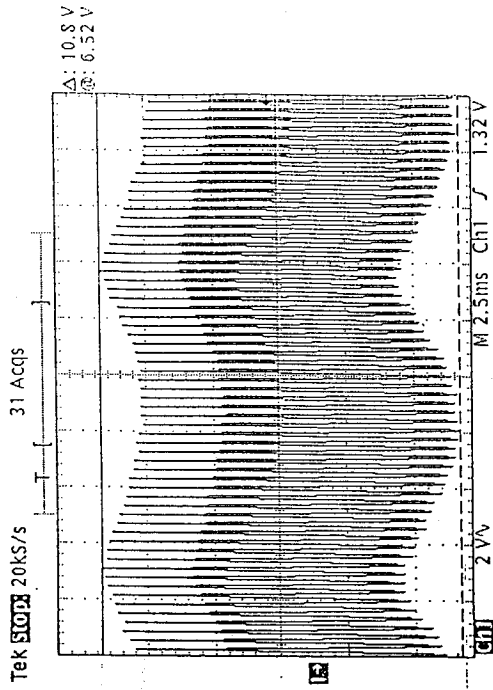


- Use magnetic pieces to improve the picture quality and make the convergence within the spec.

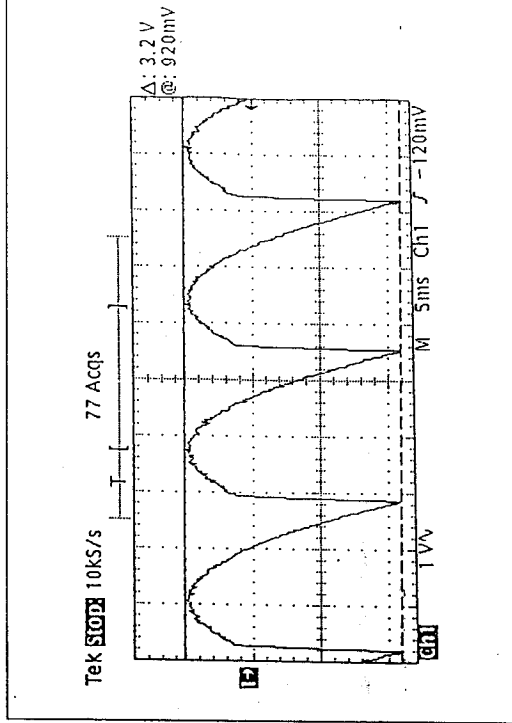
Measured Waveforms



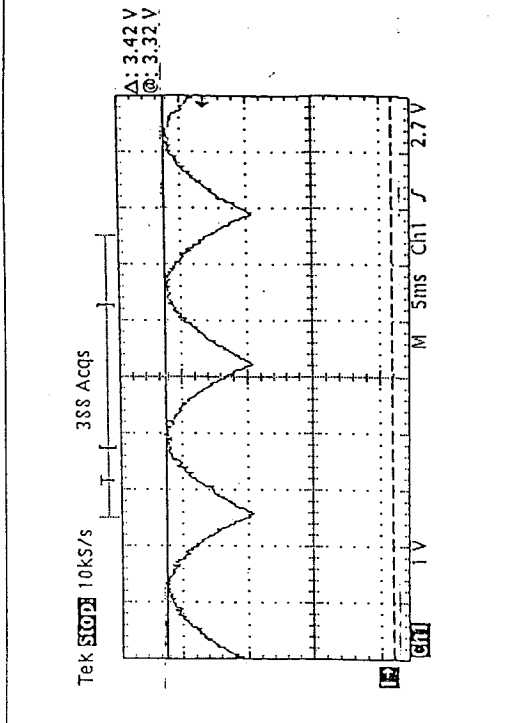
S5



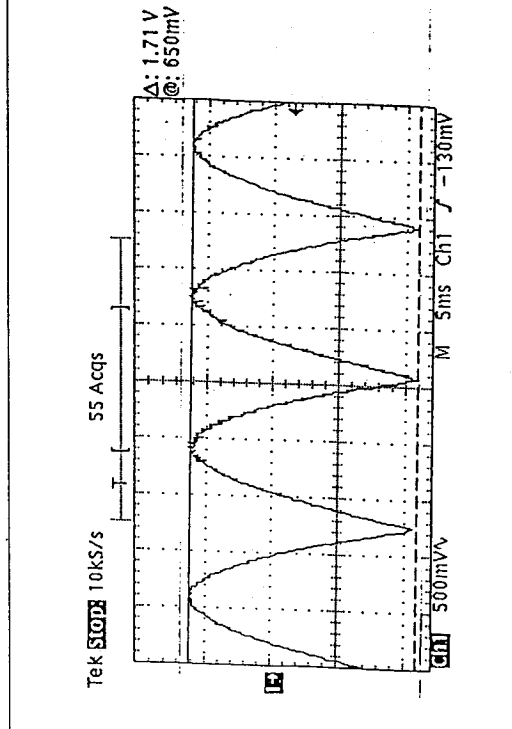
S6



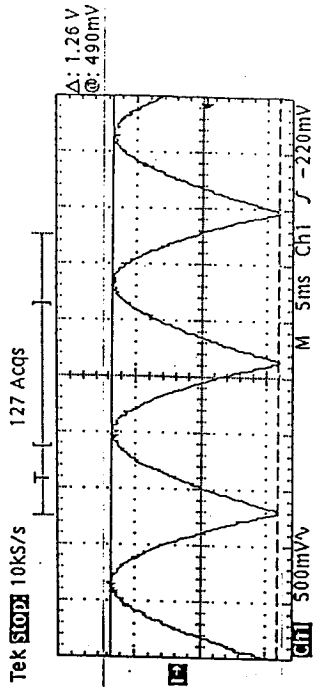
S7



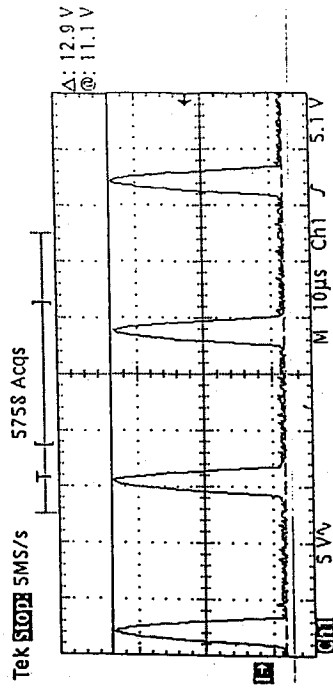
S8



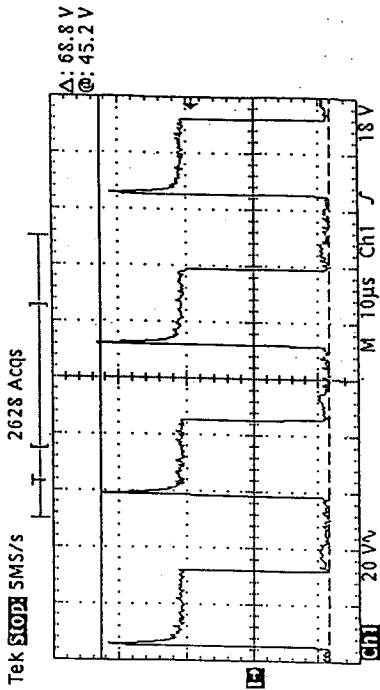
S9



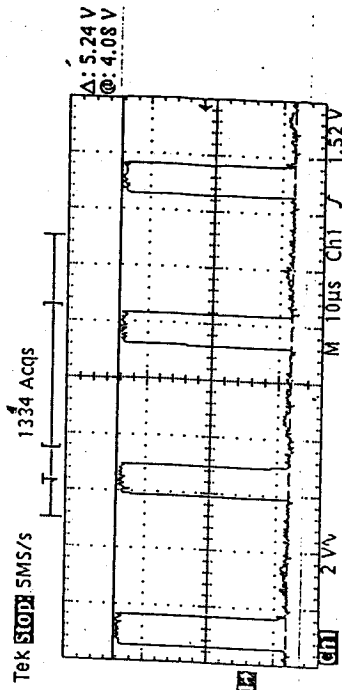
S10



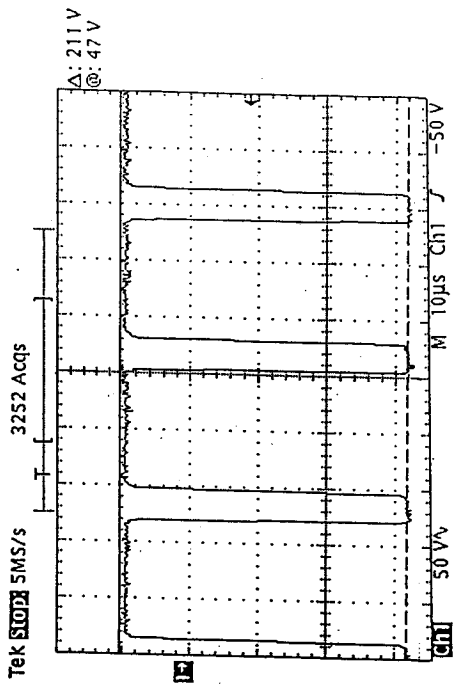
S11



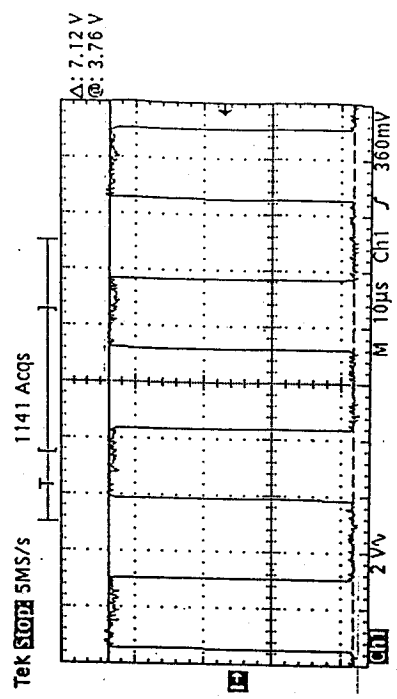
S12



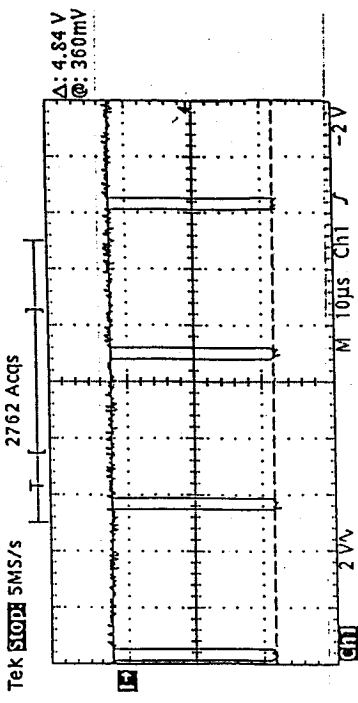
S13



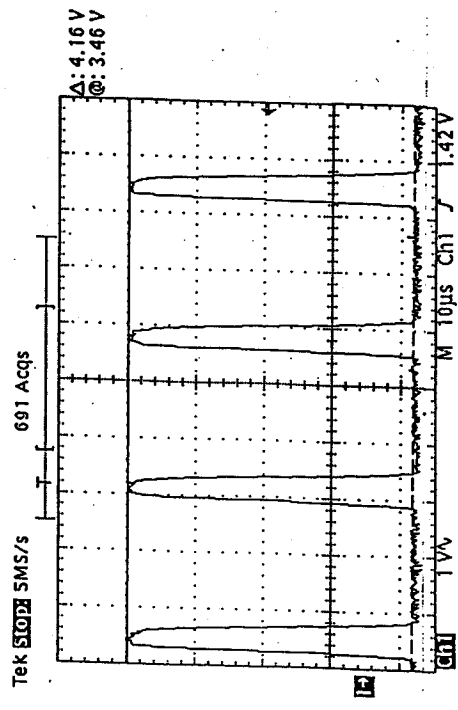
S14



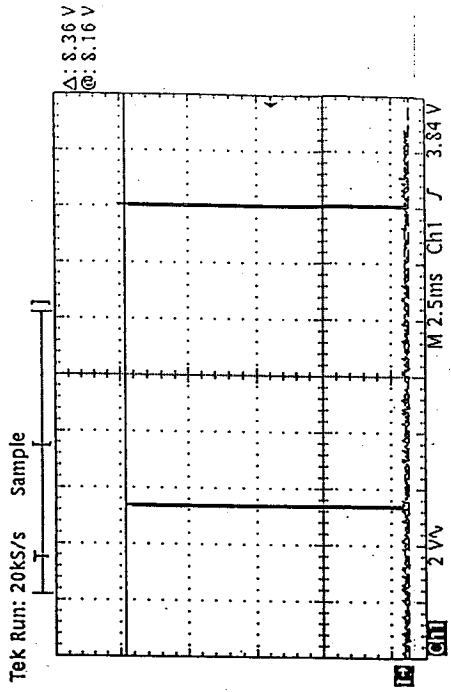
S15



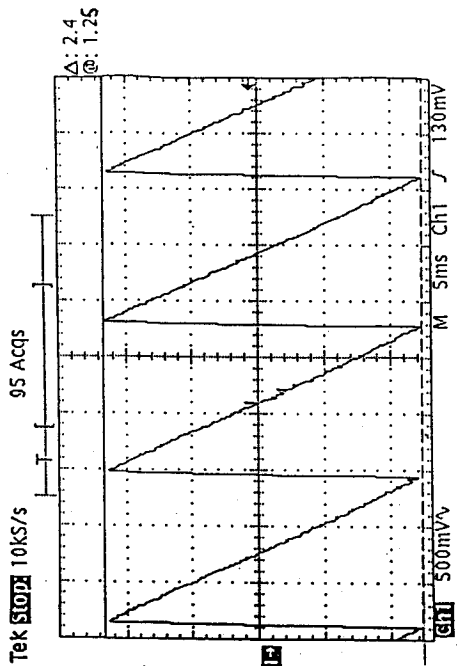
S16



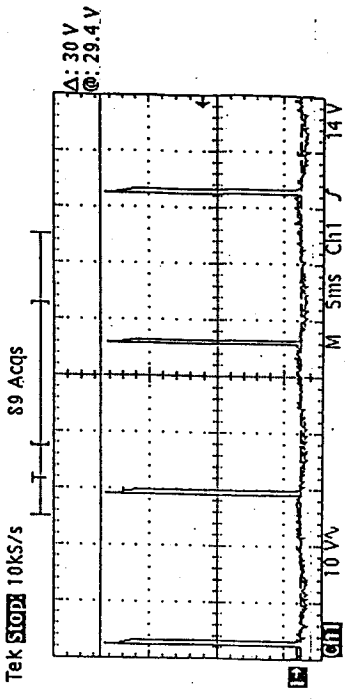
S17



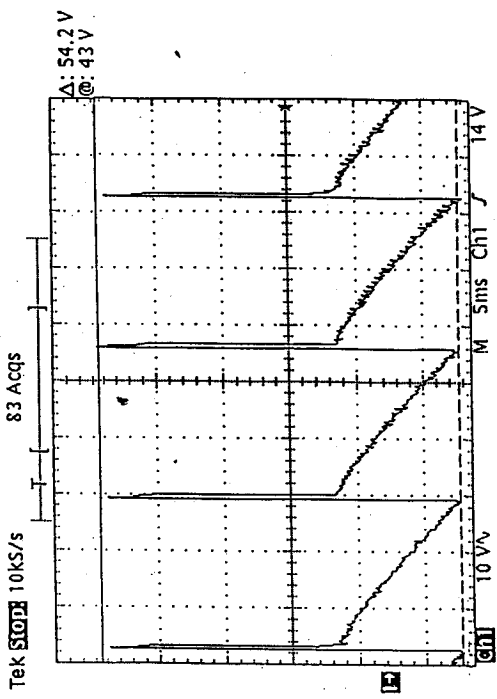
S18



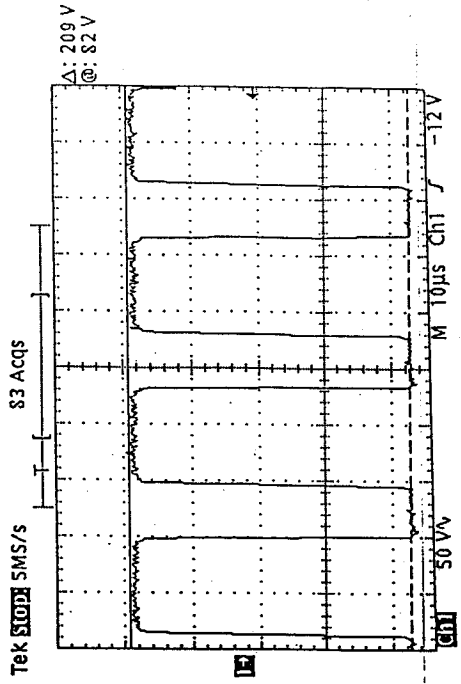
S19



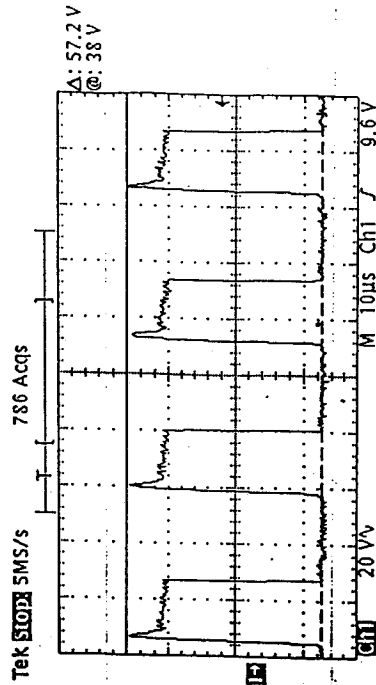
S20



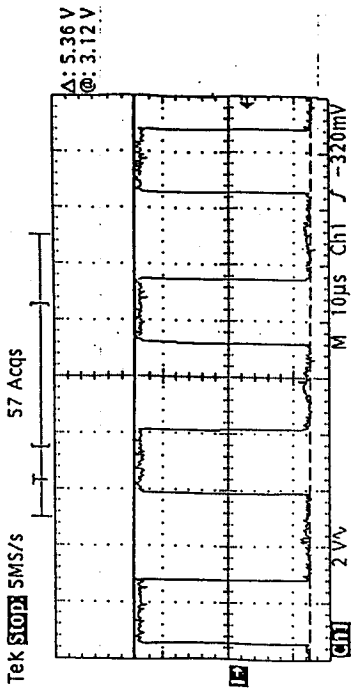
S21



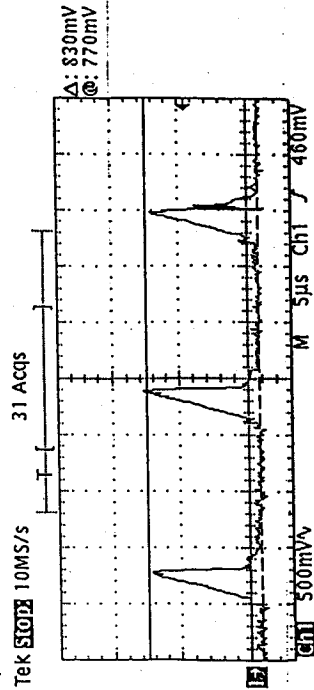
S22



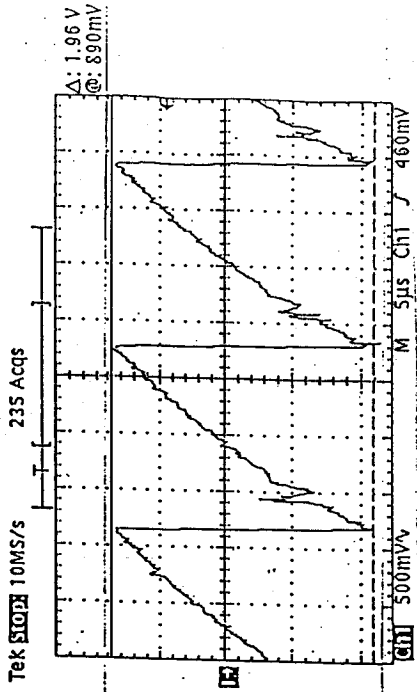
S23



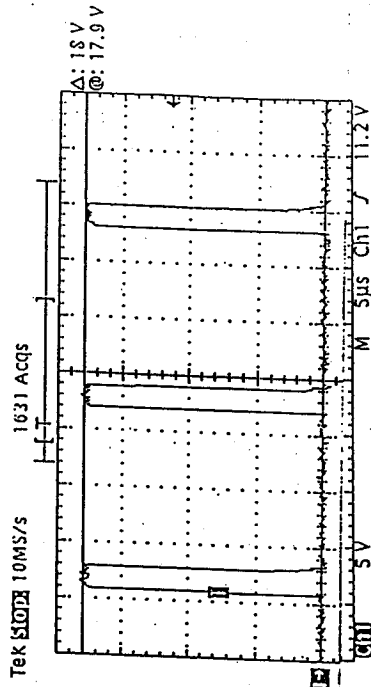
S24



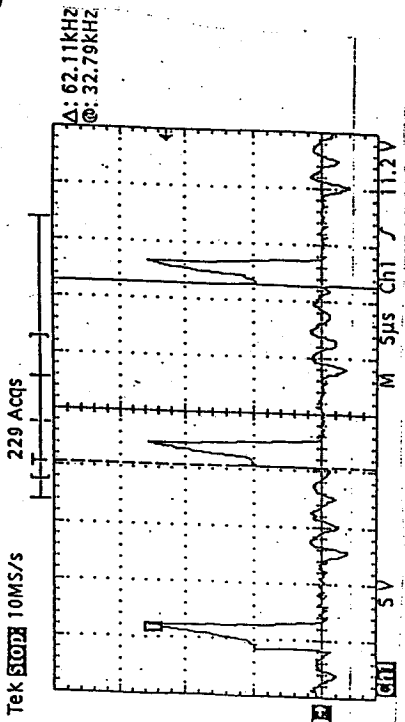
S25



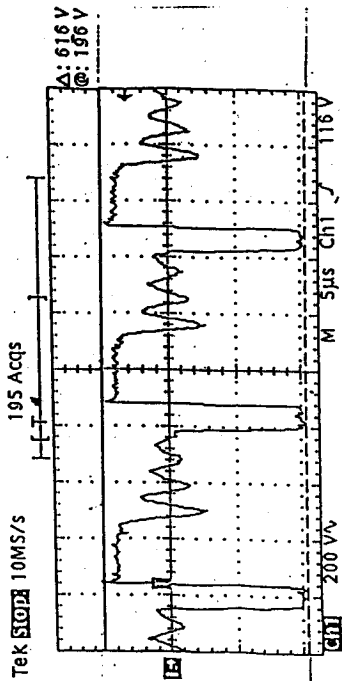
S26



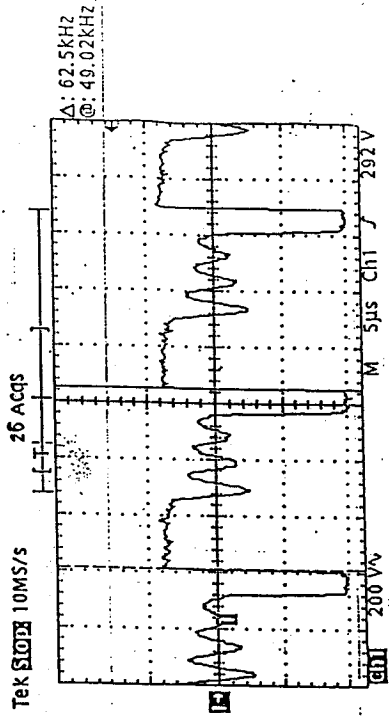
S27



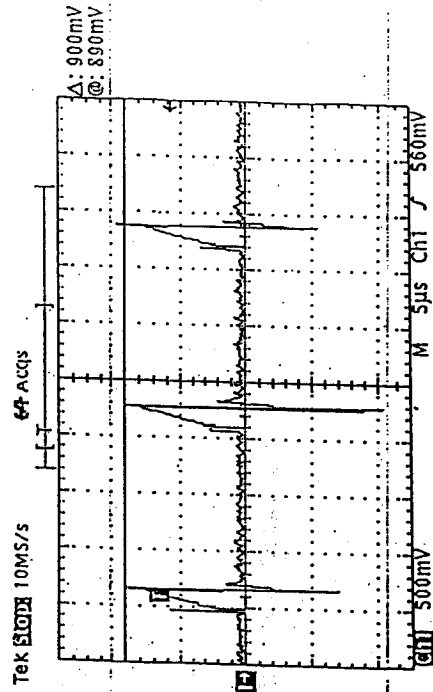
S28



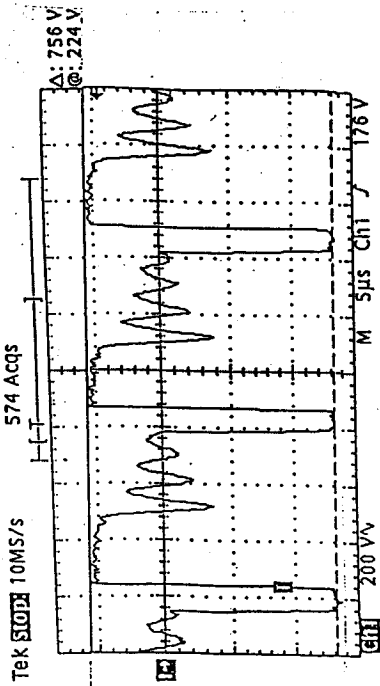
S28A



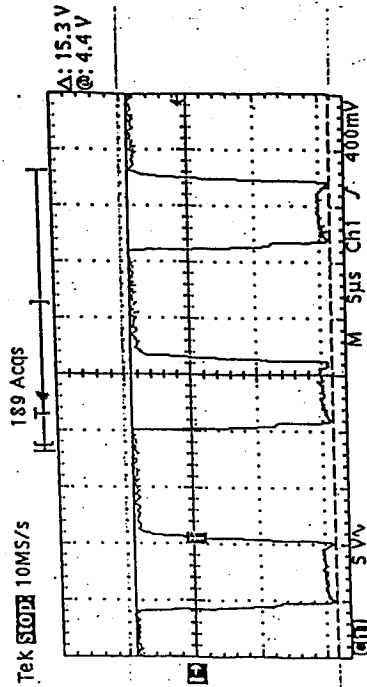
S29



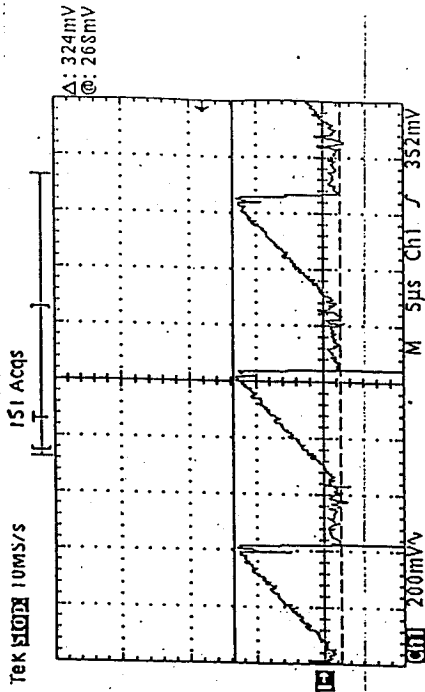
S30



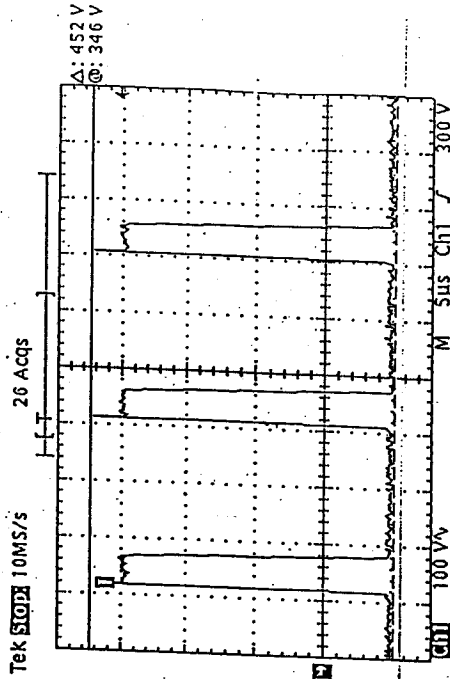
S31



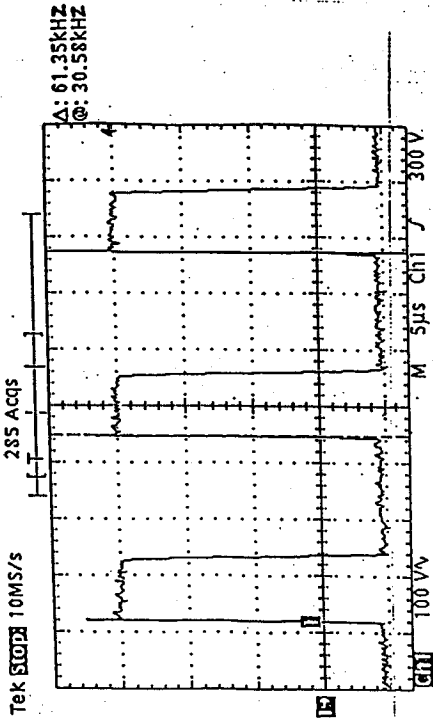
S32



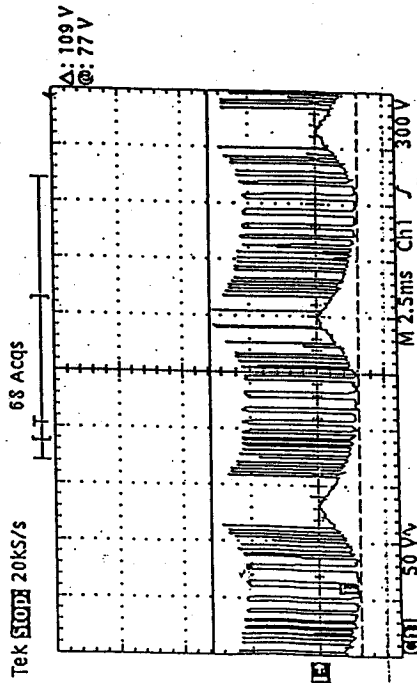
S33



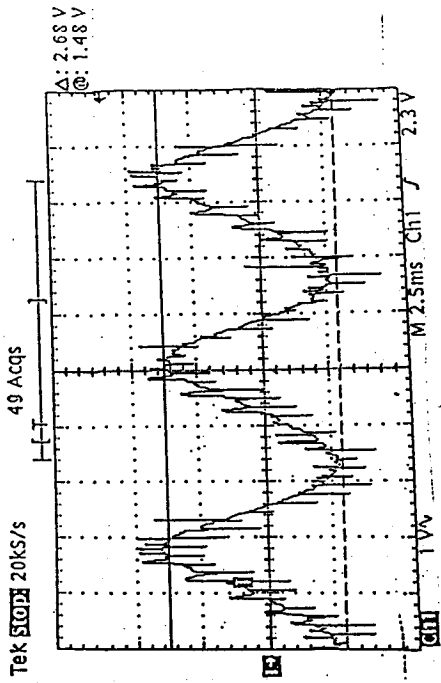
S33A



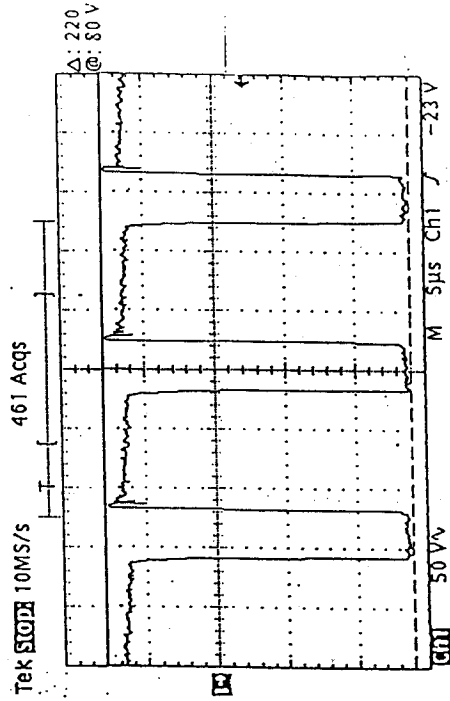
S34



S35



S36



Spare Parts List

| PART NO | D E S C R I P T I O N | Location |
|------------|--|------------------------|
| AADL150010 | FINAL ASS'Y (AF3.0HD) | |
| GNH8076N24 | NUT M8 WITH NYLON | FOR CRT |
| GSH4008B22 | SCREW TD 4*8 BIND | METAL ASSEMBLY |
| GSM3006B12 | SCREW ISO M3*6 BIND | V-PCB TO PCB-HOUSING |
| GSM8030H22 | BOLT M8*30 HEXAGON ZMC3 | FOR CRT |
| GST3512B12 | SCREW TB 3.5*12 BIND | SPEAKER TO BEZEL |
| GST4020B12 | SCREW TB 4*20 BIND | RIB TO BEZEL |
| GWF8020F14 | WASHER 24*9mm t2.0mm | FOR CRT |
| GWF8020F88 | WASHER 30*9mm,T2.0mm (RUBBER) | FOR CRT |
| H050000400 | WIRE TIE YJ-295 | FOR CRT |
| H090000100 | PLASTIC FOOT 30*15 F1058A TIFCO | |
| H090000200 | PLASTIC FOOT 26*12 F1052A TIFCO | |
| H110001300 | MOUNTING PURSE LOCK AB-8(3M) | FOR CRT |
| H110001400 | F.B.T CLIP P.G. HV-1 | FOR FBT |
| H180000400 | TWIST LOCK 2A-7 PG | FOR FBT |
| KB00001402 | BRAID (CONN.& 10mm) 100mm | SYNC BRACKET-CRT COVER |
| KB00001500 | GROUND BRAID HARNESS*2 360mm (UHD-3200) | CRT |
| KC0000060A | SIGNAL CABLE DB15*2 3M (BLUE/BLACK)W/ICON | |
| KH00002901 | H WIRE*2 #22 1007 (CONN.& 10mm) 290mm | CN910 (R-CH) |
| KH00002902 | H WIRE*2 #22 1007 (CONN.& 10mm) 710mm | CN909 (L-CH) |
| KH00008600 | H WIRE*2 #22 1007 (CONN.*2) 130mm | CNC06-CN1 |
| KH00008700 | H WIRE*6 #26 2547*1 1007*5 (CONN.*2) 150mm | CNC07-CN2 |
| KH00008800 | H WIRE*4 #26 2547*2 1007*2 (CONN.*2) 130mm | CNC08-CN3 |
| KH00009300 | H WIRE*1 #18 1015 (FAST ON&5mm) 250mm | CRT NECK TO SHIELDING |
| KP00000700 | POWER CORD SVT 18AWG 3C SHIELDED BLACK 180CM | |
| KS00002500 | S WIRE*1 #24 2547 (CONN.*2) 270mm | CNC05-CN5 |
| KS00002600 | S WIRE*3 #24 1185 (CONN.*2) 100mm | CNC09-CN4 |
| LCOIL01200 | ROTATION COIL 2P (DL-36) | |
| LCOIL01400 | DEGAUSSING COIL 2P (UHD-3200) | FOR CRT |
| MDL01ME09B | SHIELD,CRT BOARD | |
| MDL07RB020 | RUBBER FOOT | |
| MDL13FL010 | REMOTE CONTROL | |
| MDL13FL020 | REMOTE CONTROL FOR SERVICE | |
| MDL13LB012 | MODEL LABEL REV"A" (AF3.0HD) | |
| MDL13LB020 | WARNING LABEL 30KV | |
| MDL13ME050 | CHASSIS | |
| MDL13ME060 | RIGHT BRACKET | |
| MDL13ME070 | LEFT BRACKET | |
| MDL13ME080 | REAR PLATE | |

| | | |
|------------|---|----------------|
| MDL13ME090 | RIGHT COVER | |
| MDL13ME100 | LEFT COVER | |
| MDL13ME110 | TOP COVER | |
| MDL13ME120 | PCB HOUSING | |
| MDL13ME130 | BEZEL | |
| MDL13ME140 | FRAME | |
| MDL13ME150 | POWER KNOB | |
| MDL13ME160 | LIGHT GUIDER | |
| MDL13ME170 | IR COVER | |
| MDL13ME180 | FUNCTION KNOB | |
| MDL13ME190 | HOLDER | |
| MDL13ME200 | RIGHT HANDLE | |
| MDL13ME210 | LEFT HANDLE | |
| MDL13ME230 | CONTACT BRIDGE DBSH | |
| MDL13ME240 | FRONT BRACKET | |
| MDL13ME250 | TOP BRACKET | |
| MDL13ME260 | AF3.0HD PRINCETON LOGO | |
| MDL13PK010 | SPONGE 75*75*65 | |
| MDL13PK020 | POLYFOAM (TOP-FRONT) | |
| MDL13PK030 | POLYFOAM (TOP-REAR) | |
| MDL13PK040 | POLYFOAM (BOTTOM) | |
| MDL13PK050 | POLYFOAM (BASE) | |
| MDL13PK060 | PE BAG FOR MONITOR | |
| MDL13PK070 | PE BAG FOR REMOTE,MANUAL | |
| MDL13PR010 | USER'S MANUAL AF3.0HD | |
| MDL13PR020 | INSTALLATION MANUAL AF3.0HD | |
| MDL15PK010 | CARTON(TRAY) | |
| MDL15PK020 | CARTON(SLEEVE) | |
| TCCRT30V01 | COLOR CRT 30V TOSHIBA (W76LMX250X99) | |
| ZBT0000100 | BATTERY 3A | |
| ZSK800B410 | SPEAKER 8Ω AS3*2-75-8FR AURA (UHD-3200) | |
| AADL150020 | ASS'Y CRT BD (AF3.0HD) | |
| AM13282E10 | IC MC13282EP DIP MOT | I801 |
| ASTV942500 | IC SGS STV9425 DIP | I802 |
| BA1370E015 | TR 2SA1370E RTF5 SANYO | Q804,Q810,Q816 |
| BBF4230015 | TR BF423 RTF5 PHILIPS | Q805,Q811,Q817 |
| BBF4230025 | TR BF423 RTF5 TOSHIBA | Q805,Q811,Q817 |
| BC1815G025 | TR KSC1815G RTF5 SAMS | Q821 |
| BC1815GR15 | TR 2SC1815GR RTF5 TOSHIBA | Q821 |
| BC3467E015 | TR 2SC3467E RTF5 SANYO | Q803,Q809,Q815 |
| BC3955E012 | TR 2SC3955E TO126 SANYO | Q801,Q807,Q827 |
| BC4367TZ15 | TR 2SC4367TZ RTF5 HITACHI | Q802,Q808,Q814 |
| BD667AC015 | TR 2SD667AC RTF5 HITACHI | Q819 |
| BD667C0015 | TR 2SD667C RTF5 HITACHI | Q819 |

| | | |
|------------|--|---|
| BKSP420015 | TR KSP42 RTF5 SAMS | Q806,Q812,Q818 |
| CA1002FM65 | CA 10U 250V M 105°C RTF5 | C847 |
| CA10050M45 | CA 10U 50V M 105°C RTF5 | C834,C837 |
| CA10116M45 | CA 100U 16V M 105°C RTF5 | C832,C836 |
| CA10A2FM65 | CA 1U 250V M 105°C RTF5 | C807,C817,C827 |
| CA10A50M45 | CA 1U 50V M 105°C RTF5 | C810,C820,C830 |
| CA22110M45 | CA 220U 10V M 105°C RTF5 | C840,C842 |
| CA22A2FM65 | CA 2.2U 250V M 105°C RTF5 | C804,C806,C814,C824 |
| CA22A50M45 | CA 2.2U 50V M 105°C RTF5 | C808,C809,C818,C819,C828, C829 |
| CA47016M45 | CA 47U 16V M 105°C RTF5 | C856 |
| CA47A50M45 | CA 4.7U 50V M 105°C RTF5 | C850 |
| CD10150K15 | CD 100P 50V K 2-Y5P RTF5 | C845,C846 |
| CD1032KM9E | CD 0.01U 2KV M 2-Y5U RF10 | C849 |
| CD1035HK1E | CD 0.01U 500V K 2-Y5P RF10 | C826,C852,C857,C860,C863, C864 |
| CD10450Z75 | CD 0.1U 50V Z 3-Y5V RTF5 | C801,C802,C811,C812,C821, C822,C831,C833,C835,C839 C841,C853,C854,C855 |
| CD22150K15 | CD 220P 50V K 2-Y5P RTF5 | C803 |
| CD33050J45 | CD 33P 50V J 1-NP0 RTF5 | C843,C844 |
| CD39150K15 | CD 390P 50V K 2-Y5P RTF5 | C813,C823 |
| CD4725HM15 | CD 4700P 500V M 2-Y5P RTF5 | C848 |
| CD6825HK1E | CD 6800P 500V K 2-Y5P RF10 | C858 |
| CP2242FJ3G | CP 0.22U 250V J MPE RF15 | C805,C815,C825 |
| D001SS8302 | DIODE 1SS83 ATP | D803,D806,D809 |
| D01N414802 | DIODE 1N4148 ATP | D801,D802,D804,D805,D807 D808,D812 |
| DZ0HZ5C102 | ZENER HZ5C1 ATP | ZD802,ZD803 |
| DZ0HZ9B202 | ZENER HZ9B2 ATP | ZD801 |
| FF01000110 | CRT SOCKET HPS0199-017430 (DL36) | SOCKET1 |
| FF01000111 | CRT SOCKET HPS0199-010438 (DL27-1) | SOCKET1 |
| FM00200300 | CONN.MALE 2P 3.96mm W*1/LOCK | CN804 |
| FM00800200 | CONN.MALE 8P 2.5mm W*4 | CN802 |
| FM00900200 | CONN.MALE 9P 2.5mm W*4 | CN803 |
| GSH3010B12 | SCREW TD 3*10 BIND | FOR Q801,Q807,Q827 |
| H070002000 | HEAT SINK V (15*50mm) | FOR Q801,Q807,Q827 |
| KH00003401 | H WIRE*1 #18 1015 (CONN.&5mm) CORE 480mm | A-CN602 |
| KJ00007500 | JUMPER 7.5mm | D810,J801,J811,J812,J821,J8 27,J830,J831,J833,J835,J841, J842,J843,R890,R895,R898 |

| | | |
|------------|---|--|
| KJ00010000 | JUMPER 10.0mm | J803,J806,J807,J814,J816,J817,J818,J836,J837,J840,R801 |
| KJ00012500 | JUMPER 12.5mm | J802,J805,J808,J810,J813,J815,J838,J847 |
| KJ00015000 | JUMPER 15.0mm | J819,J825 |
| KJ00017500 | JUMPER 17.5mm | J804 |
| KJ00020000 | JUMPER 20.0mm | J809 |
| KS00000205 | S WIRE*3 #24 1185 (CONN&BD-IN) CORE*2 300mm | CN801-CNC04 |
| KW18100603 | WIRE #18 1015 BLACK 60mm 3/3mm | C-C' |
| KW24410503 | WIRE AWG#24 1007 BROWN 50mm 3/3mm | B-B' |
| LFB0000202 | FT BEAD CLS RH035045B-B //3.5*4.5*0.76 RTF5 | FB801,FB802 |
| LP02220K02 | PEAKING COIL 22UH K ATP | L809 |
| LP0227AK02 | PEAKING COIL 2.7UH K ATP | L802,L804,L806 |
| LP0282AK02 | PEAKING COIL 8.2UH K ATP | L801,L803,L805,L807,L810,L811 |
| PDL13S0110 | CRT PCB (UHD-3200) | |
| RB12104103 | R ARR 120 4P SIP E-TYPE | RP801 |
| RCF10114J2 | RCF 100 1/4W J ATP | R853,R868,R877 |
| RCF10218J2 | RCF 1K 1/8W J ATP | R865,R896,R897,R899 |
| RCF10318J2 | RCF 10K 1/8W J ATP | R867 |
| RCF10518J2 | RCF 1M 1/8W J ATP | R872 |
| RCF15012J2 | RCF 15 1/2W J ATP | R870 |
| RCF20214J2 | RCF 2K 1/4W J ATP | R816,R836,R857 |
| RCF20218J2 | RCF 2K 1/8W J ATP | R817,R837,R856 |
| RCF22414J2 | RCF 220K 1/4W J ATP | R811,R831,R851 |
| RCF33014J2 | RCF 33 1/4W J ATP | R804 |
| RCF33018J2 | RCF 33 1/8W J ATP | R824,R844 |
| RCF33114J2 | RCF 330 1/4W J ATP | R806,R826,R846 |
| RCF33118J2 | RCF 330 1/8W J ATP | R881 |
| RCF33214J2 | RCF 3.3K 1/4W J ATP | R892,R893,R894 |
| RCF33318J2 | RCF 33K 1/8W J ATP | R820 |
| RCF47012J2 | RCF 47 1/2W J ATP | R814,R834,R854 |
| RCF47014J2 | RCF 47 1/4W J ATP | R809,R810,R829,R830,R849,R850 |
| RCF47214J2 | RCF 4.7K 1/4W J ATP | R818,R861 |
| RCF47218J2 | RCF 4.7K 1/8W J ATP | R813,R815,R835,R855,R860,R862,R875,R876,R878,R879,R880 |
| RCF47314J2 | RCF 47K 1/4W J ATP | R833 |
| RCF47A14J2 | RCF 4.7 1/4W J ATP | R882 |
| RCF51314J2 | RCF 51K 1/4W J ATP | R812,R832,R852 |
| RCF56014J2 | RCF 56 1/4W J ATP | R805,R825 |
| RCF56018J2 | RCF 56 1/8W J ATP | R808,R828,R845,R848 |

| | | |
|------------|---|--|
| RCF68012J2 | RCF 68 1/2W J ATP | R807,R827,R847 |
| RCF68118J2 | RCF 680 1/8W J ATP | R869 |
| RCF75112J2 | RCF 750 1/2W J ATP | R864 |
| RCF75A14J2 | RCF 7.5 1/4W J ATP | R803,R823,R843 |
| RHV10614MF | HI VOLTAGE HDK 10M 1/4W M RF12.5 H-290F | R821 |
| RM121218F2 | RMF 12.1K 1/8W F ATP | R863 |
| RM324114F2 | RMF 3.24K 1/4W F ATP | R866 |
| ROM10112J2 | ROM 100 1/2W J ATP | R883 |
| ROM10412J2 | ROM 100K 1/2W J ATP | R884 |
| RSO12251JS | RSO 1.2K 5W J RSS15/H25 | R802,R822,R842,R871,R873, R874 |
| VR206B0510 | VR HOKURIKU 20MB 15 \$ VG153H | VR801 |
| ZCR800B113 | CRYSTAL 8.00MHZ TXC | X801 |
| ZSP0300112 | SPARK GAP 300V MITSUBISHI ATP | SG801,SG802,SG803,SG804 |
| ZSP1500112 | SPARK GAPA 1.5KV M MITSUBISHI ATP | SG805,SG806 |
| AADL150030 | ASS'Y MAIN BD (AF3.0HD) | |
| A000242130 | IC ST24LC21FB1 DIP ST | I204 |
| A000242140 | IC AT24C21-10PC/2.5 DIP ATMEL | I204 |
| A000242150 | IC 24LC21/P DIP MIC | I204 |
| A003842A20 | IC KA3842A DIP SAMSUNG | I101 |
| A00D165420 | IC DYNA COLOR D1654AD W MASK | I201 |
| A00LM32410 | IC LM324N DIP ST | I303 |
| A00LM35810 | IC LM358N DIP ST | I203,I302,I304,I701 |
| A00PC81750 | IC PC817C DIP SHARP | I102,I104 |
| A00TL43115 | IC TL431CZ RTF5 ST | I103 |
| A00TL43125 | IC TL431CLP RTF5 MOTOROLA | I103 |
| A0HC453810 | IC 74HC4538N DIP PHILIPS | I702 |
| A0LM129010 | IC LM1290 DIP NS | I301 |
| A24C160010 | IC AT24C16-10PC DIP ATMEL | I202 |
| ABA05T0012 | IC BA05T TO220 ROHM | I206 |
| APST994C15 | IC PST994C RTF5 SEBON | I207 |
| ATDA167513 | IC TDA1675A ST | I501 |
| BA1015GR15 | TR KSA1015GR RTF5 SAMS | Q206,Q208,Q212,Q603,Q604 Q626,Q703,Q704,Q705,Q709 Q712 |
| BA1015GR25 | TR 2SA1015GR RTF5 TOSHIBA | Q206,Q208,Q212,Q603,Q604 Q626,Q703,Q704,Q705,Q709 Q712 |
| BB561C0015 | TR 2SB561C RTF5 HITACHI | Q203,Q210 |
| BB857C0013 | IR 2SCB857C TO220 HITACHI | Q501 |
| BBD1390013 | TR BD139 TO126 PHILIPS | Q305,Q612,Q613 |
| BBD1400013 | TR BD140 TO126 PHILIPS | Q605 |
| BBF4220015 | TR BF422 RTF5 PHILIPS | Q503,Q504,Q624 |
| BBF4220025 | TR BF422 RTF5 TOSHIBA | Q503,Q504,Q624 |

| | | |
|------------|-----------------------------|--|
| BBF4230015 | TR BF423 RTF5 PHILIPS | Q602,Q625 |
| BBF4230025 | TR BF423 RTF5 TOSHIBA | Q602,Q625 |
| BC1815G025 | TR KSC1815G RTF5 SAMS | Q102,Q104,Q109,Q110,Q201 Q204,Q205,Q301,Q302,Q303 Q307,Q308,Q309,Q310,Q505 Q506,Q508,Q601,Q617,Q618 Q701,Q702,Q706,Q707,Q708 Q710 |
| BC1815GR15 | TR 2SC1815GR RTF5 TOSHIBA | Q102,Q104,Q109,Q110,Q201 Q204,Q205,Q301,Q302,Q303 Q307,Q308,Q309,Q310,Q505 Q506,Q508,Q601,Q617,Q618 Q701,Q702,Q706,Q707,Q708 Q710 |
| BC3457L013 | TR 2SC3457L TO220 SANYO | Q162 |
| BC36750013 | TR 2SC3675 TO220 SANYO | Q616 |
| BC46300012 | TR 2SC4630 TO220 SANYO | Q616 |
| BC52960012 | TR 2SC5296 TO3PML SANYO | Q611 |
| BC54070022 | TR 2SC5407 TO3P PANASONIC | Q610 |
| BD313E0013 | TR 2SD313E TO220 SANYO | Q502 |
| BD313F0013 | TR 2SD313F TO220 SANYO | Q502 |
| BD467C0015 | TR 2SD467C RTF5 HITACHI | Q161,Q202,Q209 |
| BDTC114Y15 | TR DTC114YSA RTF5 ROHM | Q107 |
| BIRF630013 | TR MOSFET IRF630 TO220 ST | Q622,Q623 |
| BIRF630023 | TR MOSFET IRF630 TO220 SAMS | Q622,Q623 |
| BIRF640013 | TR MOSFET IRF640 TO220 SAMS | Q608,Q619 |
| BIRF740013 | TR MOSFET IRF740 TO220 SAMS | Q606,Q614 |
| BK95600013 | TR MOSFET 2SK956 TO3P FUJI | Q103 |
| BKSP420015 | TR KSP42 RTF5 SAMS | Q105,Q106,Q609,Q615,Q620 Q621 |
| BTIP122013 | TR TIP122 T0220 ST | Q607 |
| BTIP122023 | TR TIP122 T0220 MOTOROLA | Q607 |
| BTIP122033 | TR TIP122 T0220 SAMS | Q607 |
| BTIP42C013 | TR TIP42C T0220 SAMS | Q108 |
| CA10016M45 | CA 10U 16V M 105°C RTF5 | C323 |
| CA1002FM65 | CA 10U 250V M 105°C RTF5 | C610 |
| CA10050M45 | CA 10U 50V M 105°C RTF5 | C111,C117,C313,C314,C327, C631,C632 |
| CA10110M45 | CA 100U 10V M 105°C RTF5 | C135 |
| CA10116M45 | CA 100U 16V M 105°C RTF5 | C107,C233,C242,C261 |

| | | |
|------------|---|---|
| CA10125M45 | CA 100U 25V M 105°C RTF5 | C202,C301,C307,C324,C325, C628,C629,C709,C712 |
| CA10135MU5 | CA 100U 35V M 105°C 10*12 RTF5 HM LUXON | C320,C514 |
| CA1014HMXE | CA 100U 400V M 22*30 RF10 HP3 HITACHI | C127 |
| CA10216MU5 | CA 1000U 16V M 105°C 10*20 RTF5 HM LUXON | C132,C134 |
| CA10235MU3 | CA 1000U 35V M 105°C 13*36 R HM LUXON | C130 |
| CA10A2FM05 | CA 1U 250V M NP 105°C RTF5 | C510 |
| CA10A2FM65 | CA 1U 250V M 105°C RTF5 | C627 |
| CA10A50M05 | CA 1U 50V M NP 105°C RTF5 | C340,C341,C722 |
| CA10A50M45 | CA 1U 50V M 105°C RTF5 | C203,C204,C209,C215,C216, C217,C218,C222,C223,C224, C225,C229,C505,C636,C638, C701,C703,C705,C711,C714 |
| CA1514FMTE | CA 150U 450V M 22*45 RF10 HP3 HITACHI | C104 |
| CA22016M45 | CA 22U 16V M 105°C RTF5 | C207 |
| CA2201HM45 | CA 22U 100V M 105°C RTF5 | C618 |
| CA2203FMU3 | CA 22U 350V M 105°C 13*20 R SM LUXON | C616 |
| CA22050M15 | CA 22U 50V M RTF5 | C161 |
| CA22050M45 | CA 22U 50V M 105°C RTF5 | C331,C332,C611,C615 |
| CA22116M45 | CA 220U 16V M 105°C RTF5 | C201,C321 |
| CA22125M45 | CA 220U 25V M 105°C RTF5 | C164,C165 |
| CA22135M45 | CA 220U 35V M 105°C RTF5 | C504 |
| CA22235M4D | CA 2200U 35V M 105°C RTF7.5 | C502 |
| CA22250M4D | CA 2200U 50V M 105°C RTF7.5 | C503 |
| CA22A2FM65 | CA 2.2U 250V M 105°C RTF5 | C106,C116 |
| CA22A50M05 | CA 2.2U 50V M NP 105°C RTF5 | C614,C643 |
| CA22A50M45 | CA 2.2U 50V M 105°C RTF5 | C113,C205,C625 |
| CA33050M45 | CA 33U 50V M 105°C RTF5 | C515 |
| CA33116M45 | CA 330U 16V M 105°C RTF5 | C213 |
| CA33A50M45 | CA 3.3U 50V M 105°C RTF5 | C318,C337,C613,C639 |
| CA47016M45 | CA 47U 16V M 105°C RTF5 | C228,C330,C708 |
| CA47025M45 | CA 47U 25V M 105°C RTF5 | C303,C517 |
| CA4702FMU3 | CA 47U 250V M 105°C 16*32 R HM LUXON | C637 |
| CA47035M45 | CA 47U 35V M 105°C RTF5 | C114,C129,C328,C642 |
| CA4703FMU1 | CA 47U 350V M 105°C 16*25 RTF7.5 SM LUXON | C128,C607 |
| CA47050M45 | CA 47U 50V M 105°C RTF5 | C319,C501,C621 |
| CA47116M45 | CA 470U 16V M 105°C RTF5 | C133,C334 |
| CA47135M45 | CA 470U 35V M 105°C RTF5 | C131 |
| CA47A50M45 | CA 4.7U 50V M 105°C RTF5 | C141,C310,C315,C336,C339 |
| CA47B2FM65 | CA 0.47U 250V M 105°C RTF5 | C720 |
| CA47B50M45 | CA 0.47U 50V M 105°C RTF5 | C333 |
| CD1011KK45 | CD 100P 1KV K 1-NP0 RTF5 | C126 |

| | | |
|------------|-------------------------------|--|
| CD10150K15 | CD 100P 50V K 2-Y5P RTF5 | C221 |
| CD1021KK15 | CD 1000P 1KV K 2-Y5P RTF5 | C163 |
| CD10250K15 | CD 1000P 50V K 2-Y5P RTF5 | C138,C231,C234,C634,C635 |
| CD1025HK15 | CD 1000P 500V K 2-Y5P RTF5 | C619,C620 |
| CD1031KK1E | CD 0.01U 1KV K 2-Y5P RF10 | C121 |
| CD1032KM9E | CD 0.01U 2KV M 2-Y5U RF10 | C622 |
| CD10350K85 | CD 0.01U 50V K 3-Y5U RTF5 | C136,C244,C245,C247,C248, C623,C717 |
| CD10450Z75 | CD 0.1U 50V Z 3-Y5V RTF5 | C102,C108,C118,C137,C167, C214,C219,C220,C227,C230, C232,C246,C249,C250,C260, C302,C308,C309,C601,C612, C721 |
| CD18150K15 | CD 180P 50V K 2-Y5P RTF5 | C630 |
| CD1825HK15 | CD 1800P 500V K 2-Y5P RTF5 | C326 |
| CD2205HJ45 | CD 22P 500V J 1-NP0 RTF5 | C644,C645,C651,C652 |
| CD22250K15 | CD 2200P 50V K 2-Y5P RTF5 | C139 |
| CD33050J45 | CD 33P 50V J 1-NP0 RTF5 | C210,C211 |
| CD33150K15 | CD 330P 50V K 2-Y5P RTF5 | C713 |
| CD3322KK1E | CD 3300P 2KV K 2-Y5P RF10 | C633 |
| CD47150K15 | CD 470P 50V K 2-Y5P RTF5 | C120,C509,C710 |
| CD47250K15 | CD 4700P 50V K 2-Y5P RTF5 | C115,C329 |
| CD4725HK95 | CD 4700P 500V K 2-Y5U RTF5 | C719 |
| CP10350J3D | CP 0.01U 50V J MPE RF7.5 | C162 |
| CP1041HJ1D | CP 0.1U 100V J PEI RF7.5 | C512 |
| CP10450J15 | CP 0.1U 50V J PEI RTF5 | C316,C508,C513,C702,C704 |
| CP10450J2D | CP 0.1U 50V J PEN RF7.5 | C626 |
| CP10450J35 | CP 0.1U 50V J MPE RTF5 | C506,C507 |
| CP15250J15 | CP 1500P 50V J PEI RTF5 | C119 |
| CP1542FJBG | CP 0.15U 250V J R75 RF15 | C641 |
| CP1834HJ6E | CP 0.018U 400V J MPP RF10 | C624 |
| CP2232FJ3D | CP 0.022U 250V J MPE RF7.5 | C648,C649 |
| CP2252FJ6Q | CP 2.2U 250V J MPP RF27.5 HJC | C602,C608 |
| CP27250G55 | CP 2700P 50V G PPN RTF5 | C706,C707 |
| CP27250J15 | CP 2700P 50V J PEI RTF5 | C322 |
| CP2744HJFM | CP 0.27U 400V J PMA RF22.5 | C605 |
| CP3334HJ6E | CP 0.033U 400V J MPP RF10 | C640 |
| CP33350J35 | CP 0.033U 50V J MPE RTF5 | C335,C338,C342,C358 |
| CP33450J1D | CP 0.33U 50V J PEI RF7.5 | C511 |
| CP3942FJBG | CP .39U 250V J R75 RF22.5 | C606 |
| CP4731HJE5 | CP 0.047U 100V J R85 RTF5 | C317 |
| CP562SHJCL | CP 5600P 1.6KV J R76 RF20 | C609 |
| CP6821KJCG | CP 6800P 1KV J R76 RF15 | C603 |
| CP68250J15 | CP 6800P 50V J PEI RTF5 | C617,C646,C647,C650 |

| | | |
|------------|-----------------------------------|--|
| CP8222KJDM | CP 8200P 2KV J R73 RF22.5 | C604 |
| CY10240013 | CY 1000P 400VAC TDK/ROEDERSTEIN R | C168 |
| CY10340013 | CY 0.01u 400VAC Z TDK R | C112 |
| CY47240013 | CY 4700P 400VAC TDK R | C101 |
| D000UR1K02 | DIODE UR1K ATP | D105,D111 |
| D001SS8302 | DIODE 1SS83 ATP | D620 |
| D00BY32903 | DIODE BY329-1200 TO220 PHILIPS | D109 |
| D00FR10302 | DIODE FR103 ATP | D106,D161,D162,D608 |
| D00FR10402 | DIODE FR104 ATP | D601,D615,D621,D623 |
| D00FR10502 | DIODE FR105 ATP | D607 |
| D00FR15402 | DIODE FR154 ATP | D603,D604 |
| D00FR20302 | DIODE FR203 ATP | D113 |
| D00SR16002 | DIODE SR160 ATP | D622 |
| D00SR3401A | DIODE SB340 AF20 GI | D114 |
| D01N400202 | DIODE 1N4002 ATP | D510 |
| D01N414802 | DIODE 1N4148 ATP | D103,D104,D115,D202,D301 D302,D308,D501,D503,D504 D506,D507,D508,D511,D605 D612,D616,D618,D619,D701 D702,D703,D704,D705,D707 D709,D710,D711 |
| D0BYM26C02 | DIODE BYM26C ATP | D602,D606 |
| D0HER10702 | DIODE HER107 ATP | D163 |
| D0HER20302 | DIODE HER203 ATP | D164 |
| D0HER20602 | DIODE HER206 ATP | D610 |
| D0HER30302 | DIODE HER303 ATP | D112 |
| D0SUF30J00 | DIODE SUF30J ATP | D613,D617 |
| D5VUZ52002 | DIODE 5VUZ52 TO3P | D614 |
| DRGP0216E2 | DIODE RGP02-16E ATP | D609,D611 |
| DZ00HZ1502 | ZENER HZ15-3 15V ATP | ZD602 |
| DZ0HZ20102 | ZENER HZ20-1 ATP | ZD102,ZD306 |
| DZ0HZ20202 | ZENER HZ20-2 ATP | ZD301,ZD501 |
| DZ0HZ4B202 | ZENER HZ4B2 ATP | ZD502 |
| DZ0HZ5C102 | ZENER HZ5C1 ATP | ZD161,ZD304,ZD708 |
| DZ0HZ6B102 | ZENER HZ6B1 ATP | ZD103,ZD201,ZD203,ZD204 ZD205,ZD206,ZD207,ZD208 ZD209,ZD213,ZD280,ZD281 |
| DZ68AEB312 | ZENER RD6.8EB3 ATP NEC | ZD104,ZD302,ZD303,ZD305 ZD601 |
| DZHZ12A102 | ZENER HZ12A1 ATP | ZD101,ZD105 |
| DZHZ12C102 | ZENER HZ12C1 ATP | ZD605,ZD606,ZD607,ZD608 ZD611,ZD612 |
| FC00200400 | FUSE CLIP FOR 5*20 FUSE | FOR F161 |

| | | |
|------------|---|--|
| FM00200110 | CONN.MALE 2P 7.92mm W*1/LOCK JST | CN102 |
| FM00200200 | CONN.MALE 2P 2.5mm W*4 | CN210 |
| FM00200700 | CONN.MALE 2P 3.96mm W*1 | CN201 |
| FM00201000 | CONN.MALE 2P(STAND-OFF 2.36 φ) 10mm | CN602,CN603 |
| FM00300200 | CONN.MALE 3P 2.5mm W*4 | I205 |
| FM00400900 | CONN.MALE 4P(YOKE) | CN601 |
| FM00800200 | CONN.MALE 8P 2.5mm W*4 | CN209 |
| FS00800300 | IC SOCKET 8 PIN 7.62mm DIP | I202 |
| FS04800200 | IC SOCKET 48 PIN 15.24mm DIP | I201 |
| GSH3010B12 | SCREW TD 3*10 BIND | FOR D109,Q162 |
| GSJ3010B12 | SCREW TE3*10 BIND | FOR Q103,Q610,Q611,D614,Q605 Q612 |
| GSM3010B12 | SCREW M3*10 BIND | FOR Q607,Q608,Q619,I501 |
| GSM3010P11 | SCREW ISO M3*10 PAN | FOR HEAT SINK |
| GSP3010P15 | SCREW M/SP-WSR 3*10 PAN | FOR Q606,Q614 |
| GWF3008F63 | FIBER WASHER M3 | FOR SCREW NO.2 |
| H010000200 | SILICON RUBBER TO-2203 W/HOLE 13*18 | FOR Q162,Q606,Q607,Q608,Q614 Q605&Q612 |
| H010001500 | SILICON RUBBER TO-3P W/O HOLE | FOR Q103 |
| H040000500 | BUSHING TO-220 | Q162,Q606,Q607,Q608,Q614 Q619 |
| H060000200 | ROUND PIN φ 1.56 | CN105 |
| H060000600 | STAND-OFF 2.36*9 | GND-I |
| H07A010500 | HEAT SINK A 23.5*50 | FOR Q606,Q607,Q614 |
| H07A020350 | HEAT SINK WD-1036 15*35 | FOR Q162 |
| H07A020400 | HEAT SINK WD-1036 15*40 | FOR Q608,Q619 |
| H07A020600 | HEAT SINK WD-1036 15*60 | FOR D109 |
| H07A04080A | HEAT SINK WD-1172 75.5*80 REV"A" | FOR IC501 |
| H07A050510 | HEAT SINK B 23*50.9 | FOR D613,D617 |
| H07A060320 | HEAT SINK C 23*31.8 | FOR D112 |
| KH00002700 | H WIRE*2 #22 1617 (CONN.*3P*2) 250mm | CN102-CN902 |
| KH00003602 | H WIRE*6 #24 1007*5 2547*1 (BD- IN&CONN.)480mm | CN202-CN802 |
| KH00004302 | H WIRE*1 #18 1015 (CONN.&FAST ON) 400mm | CN602-CRT COVER |
| KH00004500 | H WIRE*1 #18 1015 (BD-IN*2) 50mm | C,C' |
| KH00004600 | H WIRE*1 #22 1617 (BD-IN*2) 110mm | A-A1' |
| KH00004700 | H WIRE*1 #18 1015 BLACK 45mm (DL36) | H-H' |
| KH00004801 | H WIRE*1 #18 1015 (BD-IN & RING) 80mm | M,J |
| KH00004802 | H WIRE*1 #18 1015 (BD-IN & RING) 180mm | G |
| KH00004803 | H WIRE*1 #18 1015 (BD-IN & RING) 150mm | GND |
| KH00006701 | H WIRE*8 #24 1007 CORE(BD- IN*9P&CONN*9P)450mm | CN104-CN803 |

| | | |
|------------|---|---|
| KH00008500 | H WIRE*1 #18 1015 (RING&5mm) 100mm | E |
| KH00009000 | H WIRE*5#22 1007 CORE(BD-IN*6P&CONN.*6P)480mm | CN206-CN905 |
| KH00009100 | H WIRE*5 #24 1007*4 2547*1 CORE 220mm | CN207-CNC03 |
| KH00009200 | H WIRE*5 #24 1007*3 2547*2 CORE 480mm | CN205-CNB01 |
| KJ00006500 | JUMPER 6.5mm | J007,J083,J212,J214,J215,J216,J217,J218, J219,J220,J221, J222,J223,J224 |
| KJ00007500 | JUMPER 7.5mm | J005,J011,J012,J016,J017,J037,J041,J044, J045,J046,J047, J050,J052,J055,J057,J058 J059,J060,J063,J064,J068,J076,J084,J085,J094,J095,J099, J114,J119,J132,J134,J142 J164,J169,J190,J192,J193,J195,J199,J201,J202,J206,J213 ,J225,J229,J230,J237,J238 J240,J243,J248,J249 |
| KJ00010000 | JUMPER 10.0mm | J002,J003,J024,J029,J030,J031,J032,J033, J036,J042,J048, J049,J067,J069,J070,J071,J072,J074,J082,J086,J088,J089,J096,J098,J100,J101,J102,J103 J104,J105,J108,J112,J113, J120,J122,J124,J125,J126,J127,J128, J131,J133,J135,J136, J139,J141,J146,J147,J151, J159,J162,J167,J168,J173,J174,J177, J180,J183,J184,J191, J197,J200,J204,J207,J209, J210,J226,J233,J242,J244,J245 |

| | | |
|------------|--|--|
| KJ00012500 | JUMPER 12.5mm | J008,J009,J010,J013,J025,J034,J035,J038,J040,J054,J073,J078,J080,J081,J111,J115 J116,J117,J121,J129,J130,J137,J138,J145,J149,J150,J156,J157,J158,J166,J172,J182,J205,J228,J231,J232,J235,R218 |
| KJ00015000 | JUMPER 15.0mm | J004,J014,J015,J019,J028,J039,J043,J053, J065,J090,J091,J097,J109,J110,J118,J123 J140,J143,J144,J152,J154,J160,J161,J163, J187,J189,J194,J196,J198,J203,J208,J211 J227,J250 |
| KJ00017500 | JUMPER 17.5mm | J006,J026,J061,J062,J066,J079,J092,J153,J175,J188 |
| KJ00020000 | JUMPER 20.0mm | J020,J021,J027,J056,J087,J093,J155,J176,J178,J239 |
| KJ00022500 | JUMPER 22.5mm | J018,J022,J023,J165,J234,J236,J241 |
| KS00002101 | S WIRE*1 #22 1185 (BD-IN&CONN.) 500mm | CN161-CN213 |
| KS00002102 | S WIRE*1 #22 1185 (BD-1N&CONN.) 300mm | CN215-CND01 |
| KS00002103 | S WIRE*1 #22 1185 (BD-IN&CONN.) 200mm | CN216-CND03 |
| KS00002104 | S WIRE*1 #22 1185 (BD-1N&CONN.) 400mm | CN214-CND04 |
| KS00002105 | S WIRE*1 #22 1185 (BD-1N&CONN.) 120mm | CN217-CND02 |
| KW18100453 | WIRE #18 1015 BLACK 45mm 3/3mm (DL-36) | O-O' |
| LCH1110103 | CHOKE 110uH DRW6*8 | L101,L102,L103,L104,L161 |
| LCH1710203 | CHOKE 170uH DRW16*18 | L602 |
| LCH2020113 | CHOKE 2mH DRW10*16 CEI | L603 |
| LCH2020123 | CHOKE 2mH DRW10*16 MINJEC | L603 |
| LCH5020403 | CHOKE 5mH DRW8*32 | L601 |
| LFB0000205 | FERRITE BEAD RH3.5*4.5*0.76*2 RTF5 | FB102,FB202,FB203,L205 |
| LFB0000502 | FERRITE BEAD RH3.5*4.7*0.76 ATP | FB101,FB103 |
| LINEAR0603 | LINEAR COIL 3.7uH DRW14*15 | L604 |
| LP02151K02 | PEAKING COIL 150UH K ATP | L301,L302 |
| MDL01ME02C | REAR HEAT SINK REV"C" | FOR Q610 |
| MDL07ME030 | HEAT SINK L-29,TRANSISTOR (DL36) | FOR Q103 |

| | | |
|------------|----------------------------|---|
| MDL09ME070 | HEAT SINK (20*55) 32PD8000 | FOR Q605-Q612 |
| PDL13S021D | MAIN PCB REV"D" (UHD-3200) | |
| RCF10012J2 | RCF 10 1/2W J ATP | R735 |
| RCF10014J2 | RCF 10 1/4W J ATP | R125,R716 |
| RCF10114J2 | RCF 100 1/4W J ATP | R164,R222,R280,R281,R286, R287 |
| RCF10118J2 | RCF 100 1/8W J ATP | J050,R268 |
| RCF10212J2 | RCF 1K 1/2W J ATP | R658 |
| RCF10214J2 | RCF 1K 1/4W J ATP | R123,R131,R209,R220,R239, R257,R263,R690 |
| RCF10218J2 | RCF 1K 1/8W J ATP | R237,R267,R688,R711,R717, R721,R727 |
| RCF10314J2 | RCF 10K 1/4W J ATP | R121,R138,R224,R226,R235, R355,R578,R623,R651,R743 |
| RCF10318J2 | RCF 10K 1/8W J ATP | R203,R205,R213,R229,R260, R270,R301,R314,R318,R326, R334,R335,R351,R501,R622, R661,R703,R704,R706,R719, R725,R726,R731,R741 |
| RCF10414J2 | RCF 100K 1/4W J ATP | R620,R684,R685 |
| RCF10418J2 | RCF 100K 1/8W J ATP | R107,R110,R126,R132,R202, R349,R353,R705 |
| RCF10518J2 | RCF 1M 1/8W J ATP | R324 |
| RCF11214J2 | RCF 1.1K 1/4W J ATP | R127 |
| RCF12212J2 | RCF 1.2K 1/2W J ATP | R665 |
| RCF12214J2 | RCF 1.2K 1/4W J ATP | R626 |
| RCF12314J2 | RCF 12K 1/4W J ATP | R656 |
| RCF12318J2 | RCF 12K 1/8W J ATP | R333 |
| RCF12418J2 | RCF 120K 1/8W J ATP | R338 |
| RCF13218J2 | RCF 1.3K 1/8W J ATP | R116 |
| RCF15114J2 | RCF 150 1/4W J ATP | R238 |
| RCF15218J2 | RCF 1.5K 1/8W J ATP | R146,R342 |
| RCF15314J2 | RCF 15K 1/4W J ATP | R144,R207,R208,R217,R225, R264,R655 |
| RCF15318J2 | RCF 15K 1/8W J ATP | R137,R336,R352,R354,R650, R672,R676,R677,R678 |
| RCF15418J2 | RCF 150K 1/8W J ATP | R327 |
| RCF15A12J2 | RCF 1.5 1/2W J ATP | R118 |
| RCF18114J2 | RCF 180 1/4W J ATP | R115,R635,R653 |
| RCF18118J2 | RCF 180 1/8W J ATP | R707 |
| RCF18318J2 | RCF 18K 1/8W J ATP | R120,R361,R504 |
| RCF18414J2 | RCF 180K 1/4W J ATP | R134,R135,R136,R629 |

| | | |
|------------|---------------------|--|
| RCF18418J2 | RCF 180K 1/8W J ATP | R714 |
| RCF20114J2 | RCF 200 1/4W J ATP | R507 |
| RCF20118J2 | RCF 200 1/8W J ATP | R212 |
| RCF20214J2 | RCF 2K 1/4W J ATP | R332,R654 |
| RCF20314J2 | RCF 20K 1/4W J ATP | R364 |
| RCF20318J2 | RCF 20K 1/8W J ATP | R311,R322,R643,R673,R675, R679 |
| RCF20418J2 | RCF 200K 1/8W J ATP | R709 |
| RCF22014J2 | RCF 22 1/4W J ATP | R516,R674 |
| RCF22112J2 | RCF 220 1/2W J ATP | R161 |
| RCF22114J2 | RCF 220 1/4W J ATP | R689 |
| RCF22214J2 | RCF 2.2K 1/4W J ATP | R124,R265,R337,R618 |
| RCF22218J2 | RCF 2.2K 1/8W J ATP | R219,R321,R323,R328,R343, R505,R728,R733,R734 |
| RCF22314J2 | RCF 22K 1/4W J ATP | R210,R232,R637 |
| RCF22318J2 | RCF 22K 1/8W J ATP | R240 |
| RCF22414J2 | RCF 220K 1/4W J ATP | R522 |
| RCF24214J2 | RCF 2.4K 1/4W J ATP | R503,R511 |
| RCF24318J2 | RCF 24K 1/8W J ATP | R515 |
| RCF27214J2 | RCF 2.7K 1/4W J ATP | R663 |
| RCF27318J2 | RCF 27K 1/8W J ATP | R122,R149 |
| RCF27414J2 | RCF 270K 1/4W J ATP | R639,R306//R329 |
| RCF30218J2 | RCF 3K 1/8W J ATP | R657 |
| RCF30318J2 | RCF 30K 1/8W J ATP | R230,R325,R350 |
| RCF33112J2 | RCF 330 1/2W J ATP | R366 |
| RCF33118J2 | RCF 330 1/8W J ATP | R227,R234 |
| RCF33214J2 | RCF 3.3K 1/4W J ATP | R236,R625,R640,R744 |
| RCF33218J2 | RCF 3.3K 1/8W J ATP | R152,R277,R730 |
| RCF33314J2 | RCF 33K 1/4W J ATP | R742 |
| RCF33318J2 | RCF 33K 1/8W J ATP | R266,R271 |
| RCF36318J2 | RCF 36K 1/8W J ATP | R304 |
| RCF39118J2 | RCF 390 1/8W J ATP | R211,R256,R261,R723 |
| RCF39218J2 | RCF 3.9K 1/8W J ATP | R320 |
| RCF39318J2 | RCF 39K 1/8W J ATP | R150,R153,R340,R736 |
| RCF39414J2 | RCF 390K 1/4W J ATP | R520 |
| RCF43318J2 | RCF 43K 1/8W J ATP | R715 |
| RCF47014J2 | RCF 47 1/4W J ATP | R513 |
| RCF47112J2 | RCF 470 1/2W J ATP | R519 |
| RCF47114J2 | RCF 470 1/4W J ATP | R272,R360,R363,R645,R666, R701,R745 |
| RCF47118J2 | RCF 470 1/8W J ATP | R718 |
| RCF47214J2 | RCF 4.7K 1/4W J ATP | R204,R331,R339,R341,R577, R628,R638,R652,R732 |

| | | |
|------------|-----------------------|---|
| RCF47218J2 | RCF 4.7K 1/8W J ATP | R147,R215,R228,R233,R241, R242,R243,R244,R245,R276, R278,R312,R344,R345,R368, R369,R502,R518,R627,R633, R659,R662 |
| RCF47314J2 | RCF 47K 1/4W J ATP | R154,R206,R223,R258 |
| RCF47318J2 | RCF 47K 1/8W J ATP | R348,R506 |
| RCF51418J2 | RCF 510K 1/8W J ATP | R346 |
| RCF56112J2 | RCF 560 1/2W J ATP | R168 |
| RCF56114J2 | RCF 560 1/4W J ATP | R729 |
| RCF56118J2 | RCF 560 1/8W J ATP | R347 |
| RCF56218J2 | RCF 5.6K 1/8W J ATP | R315,R724 |
| RCF56314J2 | RCF 56K 1/4W J ATP | R521,R682,R683 |
| RCF56318J2 | RCF 56K 1/8W J ATP | R201,R634,R710 |
| RCF56418J2 | RCF 560K 1/8W J ATP | R370 |
| RCF68214J2 | RCF 6.8K 1/4W J ATP | R517 |
| RCF68314J2 | RCF 68K 1/4W J ATP | R624 |
| RCF68318J2 | RCF 68K 1/8W J ATP | R145 |
| RCF68A12J2 | RCF 6.8 1/2W J ATP | R114,R162 |
| RCF75114J2 | RCF 750 1/4W J ATP | R512,R642 |
| RCF75212J2 | RCF 7.5K 1/2W J ATP | R231 |
| RCF75214J2 | RCF 7.5K 1/4W J ATP | R221,R514 |
| RCF75218J2 | RCF 7.5K 1/8W J ATP | R712 |
| RCF82218J2 | RCF 8.2K 1/8W J ATP | R302,R303,R305,R374 |
| RCF82314J2 | RCF 82K 1/4W J ATP | R128 |
| RCF82318J2 | RCF 82K 1/8W J ATP | R119 |
| RCF82414J2 | RCF 820K 1/4W J ATP | R687,R691 |
| RCF91218J2 | RCF 9.1K 1/8W J ATP | R365 |
| RCF91314J2 | RCF 91K 1/4W J ATP | R579 |
| RCM27AA1JV | RCM 2.7 10W J P35/H25 | R163 |
| RM121214F2 | RMF 12.1K 1/4W F ATP | R148,R160 |
| RM162218F2 | RMF 16.2K 1/8W F ATP | R310 |
| RM174314F2 | RMF 174K 1/4W F ATP | R630 |
| RM267314F2 | RMF 267K 1/4W F ATP | R130,R143 |
| RM309114F2 | RMF 3.09K 1/4W F ATP | R151 |
| RM330214F2 | RMF 33K 1/4W F ATP | R246,R247 |
| RM365118F2 | RMF 3.65K 1/8W F ATP | R313 |
| RM392114F2 | RMF 3.92K 1/4W F ATP | R617 |
| RM511218F2 | RMF 51.1K 1/8W F ATP | R737 |
| RM562214F2 | RMF 56.2K 1/4W F ATP | R648 |
| RM680114F2 | RMF 6.8K 1/4W F ATP | R248 |
| RM681114F2 | RMF 6.81K 1/4W F ATP | R647 |
| RM750114F2 | RMF 7.50K 1/4W F ATP | R619 |

| | | |
|------------|-----------------------------------|---------------------|
| RM887118F2 | RMF 8.87K 1/8W F ATP | R702,R722 |
| ROM10214J2 | ROM 1K 1/4W J ATP | R605 |
| ROM10411J8 | ROM 100K 1W J AF15 | R609,R664,R680,R681 |
| ROM15412J2 | ROM 150K 1/2W J ATP | R644 |
| ROM22A12J2 | ROM 2.2 1/2W J ATP | R575 |
| ROM27414J2 | ROM 270K 1/4W J ATP | R108,R109 |
| ROM39111J8 | ROM 390 1W J AF15 | R610 |
| ROM47012J2 | ROM 47 1/2W J ATP | R616 |
| ROM47112J2 | ROM 470 1/2W J ATP | R319,R362 |
| ROM56111J8 | ROM 560 1W J AF15 | R523 |
| ROM56114J2 | ROM 560 1/4W J ATP | R606 |
| RSO10011J7 | RSO 10 1W J AF12.5 | R667 |
| RSO10021J8 | RSO 10 2W J AF15 | R601,R646 |
| RSO10211J7 | RSO 1K 1W J AF12.5 | R641 |
| RSO10212J2 | RSO 1K 1/2W J ATP | R613 |
| RSO10412J2 | RSO 100K 1/2W J ATP | R607,R669 |
| RSO10431J8 | RSO 100K 3W J AF15 | R113 |
| RSO10A11J8 | RSO 1 1W J AF15 | R574 |
| RSO10A21J8 | RSO 1 2W J AF15 | R611,R614 |
| RSO12A21J8 | RSO 1.2 2W J AF15 | R582 |
| RSO15221J8 | RSO 1.5K 2W J AF15 | R612 |
| RSO15411J8 | RSO 150K 1W J AF15 | R129,R159 |
| RSO18412J2 | RSO 180K 1/2W J ATP | R105,R106 |
| RSO22421J8 | RSO 220K 2W J AF15 | R111,R112,R631,R636 |
| RSO22A21J8 | RSO 2.2 2W J AF15 | R649 |
| RSO22B31JA | RSO .22 3W J AF20 | R117,R602,R603,R670 |
| RSO24211J7 | RSO 2.4K 1W J AF12.5 | R139 |
| RSO36411J2 | RSO 360K 1W J ATP | R165,R166 |
| RSO47011J8 | RSO 47 1W J AF15 | R615,R671 |
| RSO47012J2 | RSO 47 1/2W J ATP | R604 |
| RSO47221J8 | RSO 4.7K 2W J AF15 | R133,R141 |
| RSO47321J8 | RSO 47K 2W J AF15 | R167 |
| RSO47A11J7 | RSO 4.7 1W J AF12.5 | R686 |
| RSO51321JA | RSO 51K 2W J AF20 | R632 |
| RSO56021J8 | RSO 56 2W J AF15 | R510 |
| RSO56312J2 | RSO 56K 1/2W J ATP | R608,R668 |
| RSO68021J8 | RSO 68 2W J AF15 | R510 |
| RSO68031J8 | RSO 68 3W J AF15 | R367 |
| RSO75031J8 | RSO 75 3W J AF15 | R367 |
| RSO82311J7 | RSO 82K 1W J AF12.5 | R621 |
| TFBT360010 | FBT SAMPO FEA680 (DL36) | T605 |
| TTEE190010 | XFORMER EE-19 3.2mH/3.2mH | T606,T608 |
| TTEER19010 | XFORMER EER-19 N=15T 20mH MINJEC. | T161 |
| TTEI190010 | DRIVER EI-19 10mH 100uH | T301 |

| | | |
|------------|-------------------------------------|----------------|
| TTEI190030 | DRIVER EI-19 25mH/245uH | T603 |
| TTEI250040 | DYNAMIC FOCUS EI-25 1.08H/2.0mH | T607 |
| TTEI300050 | CHOKE EI-30 5.9mH | T604 |
| TTEI330060 | XFORMER EI-33 5.4mH | T602 |
| TTETD49001 | POWER TRANSFORMER ETD-49 (32PD8000) | T102 |
| VR102B0210 | VR 1KB RVM08HP05-2 | VR603 |
| VR102B0310 | VR 1KB RVM06HP03-1 | VR605 |
| VR103B0310 | VR 10KB RVM06HP03-1 | VR304 |
| VR104B0310 | VR 100KB RVM06HP03-1 | VR602 |
| VR202B0310 | VR 2KB RVM06HP03-1 | VR301,VR303 |
| VR204B0310 | VR 200KB RVM06HP03-1 | VR502 |
| VR501B0310 | VR 500B RVM06HP03-1 | VR604 |
| VR502B0310 | VR 5KB RVM06HP03-1 | VR601 |
| VR503B0310 | VR 50KB RVM06HP03-1 | VR302,VR501 |
| ZCR160A203 | CRYSTAL 16MHZ | X201 |
| ZFS1002F10 | FUSE 1.0A 250V 5*20mm BUSSMANN/S506 | F161 |
| AADL150040 | ASS'Y PFC/AUDIO BD (AF3.0HD) | |
| A00LM35810 | IC LM358N DIP ST | I911 |
| A00PC81750 | IC PC817C DIP SHARP | I901,I903,I904 |
| A00TL43115 | IC TL431CZ RTF5 ST | I905 |
| A781200012 | IC NJM7812FA 1.0A TO220 JRC | I907 |
| A781200022 | IC KA7812 1.0A TO220 SAMSUNG | I907 |
| A78L050015 | IC NJM78L05A 100mA RTF5 JRC | I906 |
| A78L050025 | IC KA78L05AZ 100mA RTF5 SAMSUNG | I906 |
| ABA3884S10 | IC BA3884S DIP ROHM | I912 |
| ATDA486210 | IC TDA4862 DIP SIEMENS | I902 |
| ATDA726313 | IC TDA7263 ST | I913 |
| AUPC140613 | IC UPC1406HA SIP NEC | I908 |
| BB647C0015 | TR 2SB647C RTF5 HITACHI | Q903 |
| BC1815G025 | TR KSC1815G RTF5 SAMS | Q901,Q912 |
| BC1815GR15 | TR 2SC1815GR RTF5 TOSHIBA | Q901,Q912 |
| BC2878A015 | TR 2SC2878A RTF5 TOSHIBA | Q913,Q914 |
| BC2878B015 | TR 2SC2878B RTF5 TOSHIBA | Q913,Q914 |
| BC3457L013 | TR 2SC3457L TO220 SANYO | Q908 |
| BC3457M013 | TR 2SC3457M TO220 SANYO | Q908 |
| BD467C0015 | TR 2SD467C RTF5 HITACHI | Q906 |
| BDTC114Y15 | TR DTC114YSA RTF5 ROHM | Q902,Q916,Q917 |
| BIRF630013 | TR MOSFET IRF630 TO220 ST | Q907 |
| BIRF630023 | TR MOSFET IRF630 TO220 SAMS | Q907 |
| BIRFPC5013 | TR MOSFET IRFPC50 TO-247AC IR | Q904 |
| CA10050M45 | CA 10U 50V M 105°C RTF5 | C900,C909,C964 |
| CA10116M45 | CA 100U 16V M 105°C RTF5 | C928 |
| CA10125M45 | CA 100U 25V M 105°C RTF5 | C933,C945,C997 |
| CA10135M45 | CA 100U 35V M 105°C RTF5 | C937 |

| | | |
|------------|---------------------------------------|--|
| CA1014FMTE | CA 100U 450V M 22*35 RF10 HP3 HITACHI | C918 |
| CA10216M45 | CA 1000U 16V M 105°C RTF5 | C934,C993,C994 |
| CA10A50M15 | CA 1U 50V M RTF5 | C938,C939,C946,C949,C950, C951,C952,C955,C956,C987, C988 |
| CA22050M15 | CA 22U 50V M RTF5 | C925,C941 |
| CA22116M45 | CA 220U 16V M 105°C RTF5 | C935 |
| CA22235M4D | CA 2200U 35V M 105°C RTF7.5 | C931 |
| CA22A50M95 | CA 2.2U 50V M NP RTF5 | C924 |
| CA33235M4D | CA 3300U 35V M 105°C RF7.5 | C996 |
| CA47025M15 | CA 47U 25V M RTF5 | C930,C943,C963,C979,C989, C990,C998 |
| CA47035M45 | CA 47U 35V M 105°C RTF5 | C911 |
| CA47135M45 | CA 470U 35V M 105°C RTF5 | C932,C936 |
| CA47A50M15 | CA 4.7U 50V M RTF5 | C971,C972,C973,C974,C980, C981,C982,C983, C984 |
| CA6804FMXE | CA 68U 450V M 22*25 RF10 HP3 HITACHI | C921 |
| CD1031KK1E | CD 0.01U 1KV K 2-Y5P RF10 | C901,C908,C917,C920,C922 |
| CD10450Z75 | CD 0.1U 50V Z 3-Y5V RTF5 | C926,C927,C929,C944,C961, C962,C995,C999 |
| CD27150K15 | CD 270P 50V K 2-Y5P RTF5 | C914 |
| CD47150K15 | CD 470P 50V K 2-Y5P RTF5 | C967,C968 |
| CP10350J15 | CP 0.01U 50V J PEI RTF5 | C959,C960,C975,C976 |
| CP10363JA5 | CP 0.01U 63V J MEMB RTF5 | C912 |
| CP10450J15 | CP 0.1U 50V J PEI RTF5 | C991,C992 |
| CP1054HJ6Q | CP 1U 400V J MPP RF27.5 | C907 |
| CP10563JA5 | CP 1U 63V J MEMB RTF5 | C915,C916 |
| CP15250J15 | CP 1500P 50V J PEI RTF5 | C947,C948,C985,C986 |
| CP2231HJ15 | CP 0.022U 100V J PEI RTF5 | C923 |
| CP2724HJ5E | CP 2700P 400V J PPN RF10 | C913 |
| CP47350J15 | CP 0.047U 50V J PEI RTF5 | C977,C978 |
| CP68350J15 | CP 0.068U 50V J PEI RTF5 | C969,C970 |
| CP68463JA5 | CP 0.68U 63V J MEMB RTF5 | C910 |
| CX10427523 | CX 0.1U 275VAC ISKRA/SIEMENS R | C902 |
| CX47427513 | CX 0.47U 275VAC ISKRA/SIEMENS R | C903 |
| CY47240013 | CY 4700P 400VAC TDK R | C904,C905,C940 |
| D00FR10302 | DIODE FR103 ATP | D908,D909,D914 |
| D00FR10602 | DIODE FR106 ATP | D907 |
| D00FR20402 | DIODE FR204 ATP | D913 |
| D00FR3040A | DIODE FR304 AF20 | D915 |
| D00SR3601A | DIODE SR360 AF20 GI | D912 |
| D00SR3602A | DIODE SR306 AF20 MOSPEC | D912 |
| D01N414802 | DIODE 1N4148 ATP | D901,D910,D916,D919,D921 D922,D923,D924 |

| | | |
|------------|--|------------------------------------|
| D0HER10602 | DIODE HER106 ATP | D902,D903 |
| D0SUF30J00 | DIODE SUF30J ATP | D904 |
| DKBJ606G13 | BRIDGE KBJ606G R CENTRAL | BR901 |
| DZ0HZ15202 | ZENER HZ15-2 ATP | ZD902 |
| DZ0HZ7B202 | ZENER HZ7B2 ATP | ZD903 |
| DZ1N474502 | ZENER 16V 1W 1N4745A ATP HITACHI | ZD901 |
| DZHZ11B202 | ZENER HZ11B2 ATP | ZD905 |
| FC00200400 | FUSE CLIP FOR 5*20 FUSE | FOR F901,F902 |
| FM00200110 | CONN.MALE 2P 7.92mm W*1/LOCK JST | CN902 |
| FM00200200 | CONN.MALE 2P 2.5mm W*4 | CN909,CN910 |
| FM00201000 | CONN.MALE 2P(STAND-OFF 2.36 φ) 10mm | CN901,RT902 |
| FM00600200 | CONN.MALE 6P 2.5mm W*4 | CN905 |
| GSG3010F11 | SCREW TP3*10 FLAT BLK | BRACKET |
| GSM3006W12 | SCREW M3*6 WASHER | FOR I913 HEAT SINK |
| GSM3008W12 | SCREW M3*8 WASHER | FOR I913 |
| GSM3010W12 | SCREW M3*10 WASHER | FOR Q908,Q904,BR901 |
| H010000500 | SILICON RUBBER W/HOLE 24*30 | FOR Q904 |
| H010000600 | SILICON RUBBER W/HOLE 30*30 | FOR BR901 |
| H010001500 | SILICON RUBBER TO-3P W/O HOLE | FOR Q908 |
| H050000100 | WIRE TIE YJ-98 | Q904 HENT SINK |
| H060000600 | STAND-OFF 2.36*9 | GND C |
| H07A000550 | HEAT SINK WD-1107 31*55 | FOR Q908 |
| H07A060320 | HEAT SINK C 23*31.8 | FOR D904 |
| H130000210 | TRANSISTOR COVER TR-06 L16.2*W13.2*T6.4 PG | FOR Q908 |
| KH00008000 | H WIRE*5 #22 1007 (BD-IN&CONN.) 400mm | CN904 |
| KH00008100 | H WIRE*2 #22 1007 (BD-IN&CONN.) 600mm | CN906 |
| KH00008200 | H WIRE*1 #22 1617 (5mm&CONN.) 400mm | CN903 |
| KH00008500 | H WIRE*1 #18 1015 (RING&5mm) 100mm | GND D |
| KJ00007500 | JUMPER 7.5mm | J908,J914,J915,J924,J925,J927 |
| KJ00010000 | JUMPER 10.0mm | J902,J907,J916,J917,J930 |
| KJ00012500 | JUMPER 12.5mm | J901,J906,J909,J910,J920,J921,J922 |
| KJ00015000 | JUMPER 15.0mm | J911 |
| KJ00030000 | JUMPER 30.0mm | J903,J904,J905 |
| KS00002400 | S WIRE*1 #24 2547 (B-IN&CONN) 680mm | CN908 |
| KW18503005 | WIRE #18 UL1617 BLACK 300mm 5/5mm | GND A – GND E |
| LCH1110103 | CHOKER 110uH DRW6*8 | L901 |
| LCH3000103 | CHOKER 30uH DRW6*8 | L905,L908 |
| LFB0000205 | FERRITE BEAD RH3.5*4.5*0.76*2 RTF5 | FB910,FB911,FB912,FB913 |
| MDL07ME040 | HEAT SINK U-21,TRANSISTOR (DL36) | FOR Q904 |
| MDL09ME010 | HEAT SINK (32PD8000) | FOR I913 |
| MDL13ME010 | BRACKET FOR AC | BRACKET WITH PC SHEET |

| | | |
|------------|---------------------------------|---|
| PDL13S031B | PFC/AUDIO PCB REV"B" (UHD-3200) | |
| RCF10014J2 | RCF 10 1/4W J ATP | R912,R917 |
| RCF10112J2 | RCF 100 1/2W J ATP | R950 |
| RCF10214J2 | RCF 1K 1/4W J ATP | R923,R939 |
| RCF10218J2 | RCF 1K 1/8W J ATP | R934,R957,R958,R996 |
| RCF10318J2 | RCF 10K 1/8W J ATP | R903,R907,R926,R945,R955, R956,R965,R966,R967,R968, R969,R970,R975,R976 |
| RCF10A12J2 | RCF 1 1/2W J ATP | R935 |
| RCF15118J2 | RCF 150 1/8W J ATP | R977 |
| RCF15414J2 | RCF 150K 1/4W J ATP | R901,R902 |
| RCF22018J2 | RCF 22 1/8W J ATP | R944 |
| RCF22218J2 | RCF 2.2K 1/8W J ATP | R994 |
| RCF22318J2 | RCF 22K 1/8W J ATP | R918 |
| RCF27318J2 | RCF 27K 1/8W J ATP | R959,R960 |
| RCF27418J2 | RCF 270K 1/8W J ATP | R927 |
| RCF30218J2 | RCF 3K 1/8W J ATP | R987,R988 |
| RCF33214J2 | RCF 3.3K 1/4W J ATP | R949 |
| RCF33218J2 | RCF 3.3K 1/8W J ATP | R933,R947,R953,R954,R979, R980,R981,R982 |
| RCF33314J2 | RCF 33K 1/4W J ATP | R916 |
| RCF39218J2 | RCF 3.9K 1/8W J ATP | R904 |
| RCF39318J2 | RCF 39K 1/8W J ATP | R948 |
| RCF47018J2 | RCF 47 1/8W J ATP | R989,R990 |
| RCF47118J2 | RCF 470 1/8W J ATP | R946 |
| RCF47218J2 | RCF 4.7K 1/8W J ATP | R952 |
| RCF47312J2 | RCF 47K 1/2W J ATP | R932 |
| RCF47318J2 | RCF 47K 1/8W J ATP | R908,R983,R984,R995 |
| RCF47A14J2 | RCF 4.7 1/4W J ATP | R991,R992 |
| RCF51214J2 | RCF 5.1K 1/4W J ATP | R921 |
| RCF56114J2 | RCF 560 1/4W J ATP | R941 |
| RCF56218J2 | RCF 5.6K 1/8W J ATP | R906 |
| RCF82012J2 | RCF 82 1/2W J ATP | R930,R931 |
| RCF91214J2 | RCF 9.1K 1/4W J ATP | R911 |
| RCM68151JT | RCM 680 5W J P25/H25 | R913 |
| RM105214F2 | RMF 10.5K 1/4W F ATP | R922 |
| RM121214F2 | RMF 12.1K 1/4W F ATP | R942 |
| RM750114F2 | RMF 7.50K 1/4W F ATP | R943 |
| RM750314F2 | RMF 750K 1/4W F ATP | R937 |
| ROM27412J2 | ROM 270K 1/2W J ATP | R928,R929 |
| RSO12411F7 | RSO 120K 1W F AF12.5 | R914,R915 |
| RSO12A31JA | RSO 1.2 3W J AF20 | R940 |
| RSO15011J2 | RSO 15 1W J ATP | R909,R910,R919,R920 |

| | | |
|------------|--|---|
| RSO33B31JA | RSO 0.33 3W J AF20 | R924,R925 |
| RTM50AN023 | NTC 20SO50M 5Ω | RT902 |
| RTM80AP033 | PTC TOPTREND/D6-08MB 8Ω | RT901 |
| TTE4220120 | POWER TRANSFORMER EE4220 CEI/MINJEC | T904 |
| TTEEL28020 | POWER TRANSFORMER 1.4mH EEL-28 CEI | T905 |
| TTSS28V010 | LINE FILTER SS28V (ET-28) 4.5mH MINJEC | T902 |
| TTSS28V011 | LINE FILTER SS28V (ET-28) 4.5mH CEI | T902 |
| TTSS35V010 | LINE FILTER SS35V (ET-33) 28mH TDK | T903 |
| TTSS35V011 | LINE FILTER SS35V (ET-35) 28mH CEI | T903 |
| TTSS35V012 | LINE FILTER SS35V (ET-35) 28mH MINJEC | T903 |
| ZFS1602F10 | FUSE 1.60A 250V 5*20mm BUSSMANN/S506 | F902 |
| ZFS4002F10 | FUSE 4.0A 250V 5*20mm BUSSMANN/S506 | F901 |
| ZFT0000610 | EMI FILTER IX-0342-P DIT (DL36) | T901 |
| ZRY12T5110 | RELAY OEG OMIT-SS-112LM 12V TV-5A | RL901 |
| ZVATH14113 | VARISTOR 300V ISKRA V300K14 | VZ901 |
| AADL150050 | ASS'Y SYNC BD (AF3.0HD) | |
| A00LM35810 | IC LM358N DIP ST | IB02,IB04 |
| A0HC453810 | IC 74HC4538N DIP PHILIPS | IB03,IB05 |
| A781200022 | IC KA7812 1.0A TO220 SAMSUNG | IC01 |
| A781800022 | IC KA7818 1.0A TO220 SAMSUNG | IA03 |
| ABA05T0012 | IC BA05T TO220 ROHM | IC06 |
| ABA7657S10 | IC BA7657S DIP ROHM | IC02,IC03,IC04 |
| AL232CPE10 | IC L232CPE DIP HARRIS | IB06 |
| AM14052B10 | IC MC14052B DIP MOT | IC05 |
| AM62393010 | IC M62393P DIP MITSUBISHI | IB01 |
| AMC1496P10 | IC MC1496P DIP MOT | IA01,IA02 |
| BA1015GR15 | TR KSA1015GR RTF5 SAMS | QA04,QA14,QA24,QB01,QB02,QB11,QB12 |
| BA1015GR25 | TR 2SA1015GR RTF5 TOSHIBA | QA04,QA14,QA24,QB01,QB02,QB11,QB12 |
| BC1815G025 | TR KSC1815G RTF5 SAMS | QA06,QA07,QA08,QA09,QA31,QA32,QA33,QA34,QA35,QA36,QA37,QB03,QB06,QB07,QB08,QB09 |
| BC1815GR15 | TR 2SC1815GR RTF5 TOSHIBA | QA06,QA07,QA08,QA09,QA31,QA32,QA33,QA34,QA35,QA36,QA37,QB03,QB06,QB07,QB08,QB09 |
| BC4367TZ15 | TR 2SC4367TZ RTF5 HITACHI | QA01,QA02,QA03,QA05,QA10,QA11,QA12,QA13,QA15,QA21,QA22,QA23,QA25 |
| CA10016M95 | CA 10U 16V M NP RTF5 | CC76 |
| CA10025M15 | CA 10U 25V M RTF5 | CA54,CA57,CA60 |

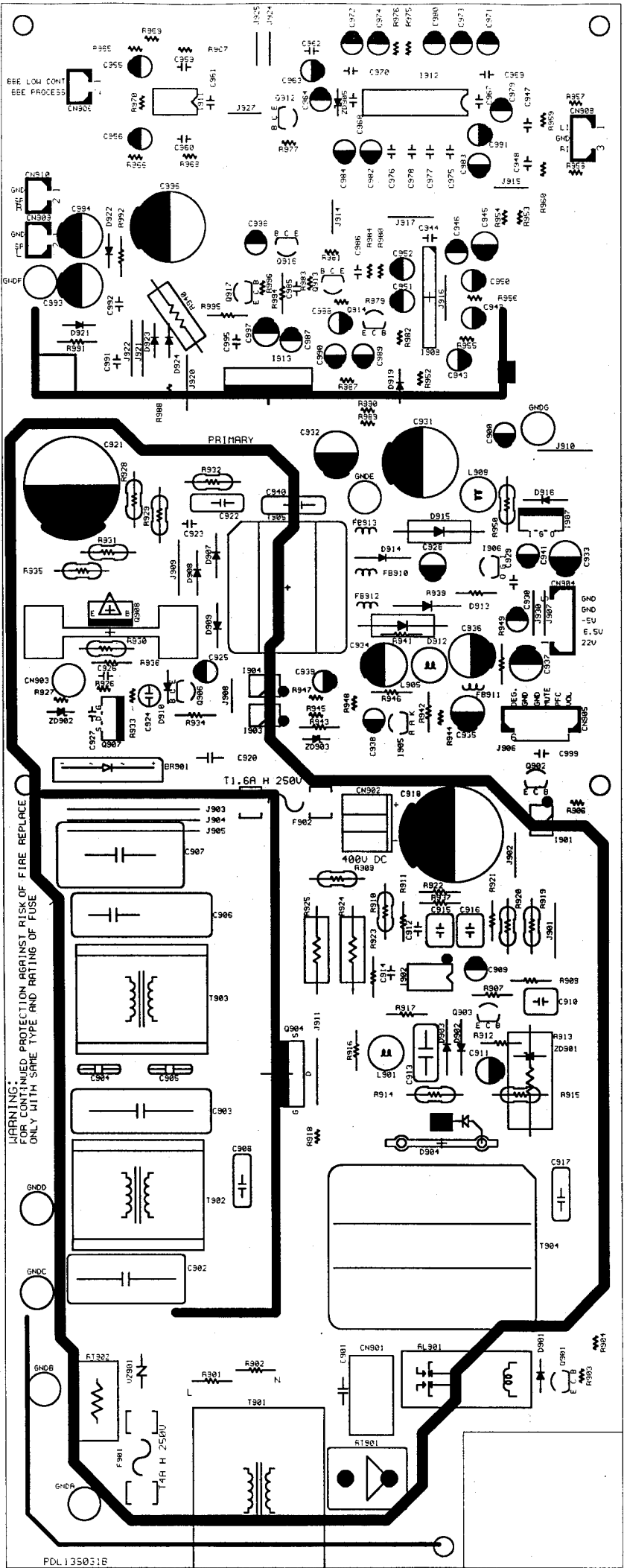
| | | |
|------------|----------------------------------|---|
| CA10125M15 | CA 100U 25V M RTF5 | CA53,CC02 |
| CA10135M15 | CA 100U 35V M RTF5 | CA02,CA12,CA14,CA22 |
| CA10A50M15 | CA 1U 50V M RTF5 | CA34,CA35,CA44,CA45,CA58 |
| CA22025MS5 | CA 22U 25V 5*7 M RTF5 SS LUXON | CB31,CB32,CB33,CB34 |
| CA22135M15 | CA 220U 35V M RTF5 | CA51,CA59 |
| CA22A50M95 | CA 2.2U 50V M NP RTF5 | CA06 |
| CA47016MS5 | CA 47U 16V M 5*7 RTF5 SS LUXON | CB01,CB13,CB23,CC04,CC22,CC25,CC27,CC29,CC31,CC33,CC35,CC42,CC45,CC47,CC49,CC51,CC53,CC55,CC62,CC65,CC67,CC69,CC71,CC73,CC75 |
| CA47025MS5 | CA 47U 25V M GR 6.3*7 RTF5 LUXON | CA31,CA32,CA41,CA42,CA55,CA56 |
| CA47A50M15 | CA 4.7U 50V M RTF5 | CA05 |
| CD10350K85 | CD 0.01U 50V K 3-Y5U RTF5 | CA52,CC21,CC24,CC26,CC28,CC30,CC32,CC34,CC41,CC44,CC46,CC48,CC50,CC52,CC54,CC61,CC64,CC66,CC68,CC70,CC72,CC74 |
| CD10450Z75 | CD 0.1U 50V Z 3-Y5V RTF5 | CA01,CA03,CA04,CA11,CA13,CA21,CA23,CA33,CA43,CA46,CA61,CB02,CB03,CB04,CB05,CB06,CB07,CB08,CB09,CB10,CB14,CB24,CC01,CC03,CC05,CC77 |
| CD47150K15 | CD 470P 50V K 2-Y5P RTF5 | CB16,CB17,CB25,CC06,CC07,CC23,CC43,CC63 |
| CD68150J45 | CD 680P 50V J 1-NP0 RTF5 | CB12 |
| CD6825HK1E | CD 6800P 500V K 2-Y5P RF10 | CB15,CB18 |
| CP27250G55 | CP 2700P 50V G PPN RTF5 | CB11 |
| CP27350G55 | CP 0.027U 50V G PPN RTF5 | CB21 |
| CP47250G55 | CP 4700P 50V G PPN RTF5 | CB22 |
| D01N414802 | DIODE 1N4148 ATP | DA07,DA08,DA09,DB01,DB02,DB03,DB04,DB05,DB07,DB08,DB13,DB14,DC01,DC02,DC03,DC04,DC05,DC06,DC19,DC20,DC33,DC34 |
| DZ0HZ18202 | ZENER HZ18-2 ATP | ZDB11,ZDB12,ZDB13,ZDB14 |

| | | |
|------------|------------------------------------|---|
| DZ0HZ5C102 | ZENER HZ5C1 ATP | ZDB01,ZDB02,ZDC01,ZDC02,ZDC03,ZDC04,ZDC05,ZDC06,ZDC07,ZDC08,ZDC09,ZDC10,ZDC11,ZDC12,ZDC21,ZDC22,ZDC23,ZDC24,ZDC25,ZDC26,ZDC27,ZDC28,ZDC29,ZDC30,ZDC31,ZDC32 |
| FF00100610 | BNC SOCKET G3171004B AMPHENOL | FOR YUV-1,YUV-2,R.G.B. |
| FJ00100721 | RCA JACK 1P 0501029R RED M.S.K. | AL,AL1,AL2 |
| FJ00100722 | RCA JACK 1P 0501029W WHITE M.S.K | AR,AR1,AR2 |
| FM00200200 | CONN.MALE 2P 2.5mm W*4 | CNC06 |
| FM00201200 | CONN.MALE 2P(H) 2.5mm W*4 | CNB02 |
| FM00300200 | CONN.MALE 3P 2.5mm W*4 | CNC02,CNC05 |
| FM00501200 | CONN.MALE 5P(H) 2.5mm W*4 | CNC01 |
| FM00600200 | CONN.MALE 6P 2.5mm W*4 | CNC09 |
| FM00601200 | CONN.MALE 6P(H) 2.5mm W*4 | CNC04 |
| FM00700200 | CONN.MALE 7P 2.5mm W*4 | CNC08 |
| FM00701200 | CONN.MALE 7P(H) 2.5mm W*4 | CNC03 |
| FM00800200 | CONN.MALE 8P 2.5mm W*4 | CNC07 |
| FM00901200 | CONN.MALE 9P(H) 2.5mm W*4 | CNB01 |
| FM00901410 | CONN.MALE 9P G17T AMPHENOL | CNB11 |
| GNH3030A12 | NUT M3 | FOR IA03-IC06 |
| GSM3010B12 | SCREW M3*10 BIND | FOR IA03-IC06 |
| KH00008400 | H WIRE*2 #24 1185 (5mm*2) 150mm | Y -'Y,GND -'GND |
| KJ00007500 | JUMPER 7.5mm | RB04 |
| LFB0000205 | FERRITE BEAD RH3.5*4.5*0.76*2 RTF5 | FBA01,FBA02,FBC18,FBC19 |
| LFB0000502 | FERRITE BEAD RH3.5*4.7*0.76 ATP | FBC10,FBC11,FBC12,FBC13,FBC14,FBC15,FBC16,FBC17 |
| LP0210AJ02 | PEAKING COIL 1UH J ATP | LA01,LA02,LA03,LA04,LA05,LA06,LA07,LA08 |
| MDL13ME020 | BRACKET FOR BNC R.G.B. | |
| MDL13ME030 | BRACKET FOR BNC YUV | |
| PDL13D051B | SYNC PCB REV"B" (UHD-3200) | |
| RCF10014J2 | RCF 10 1/4W J ATP | RA80 |
| RCF10018J2 | RCF 10 1/8W J ATP | RA84,RA85,RA86,RC18,RC19,RC20 |
| RCF10114J2 | RCF 100 1/4W J ATP | RA53,RB11,RB12 |
| RCF10118J2 | RCF 100 1/8W J ATP | RC42,RC43 |

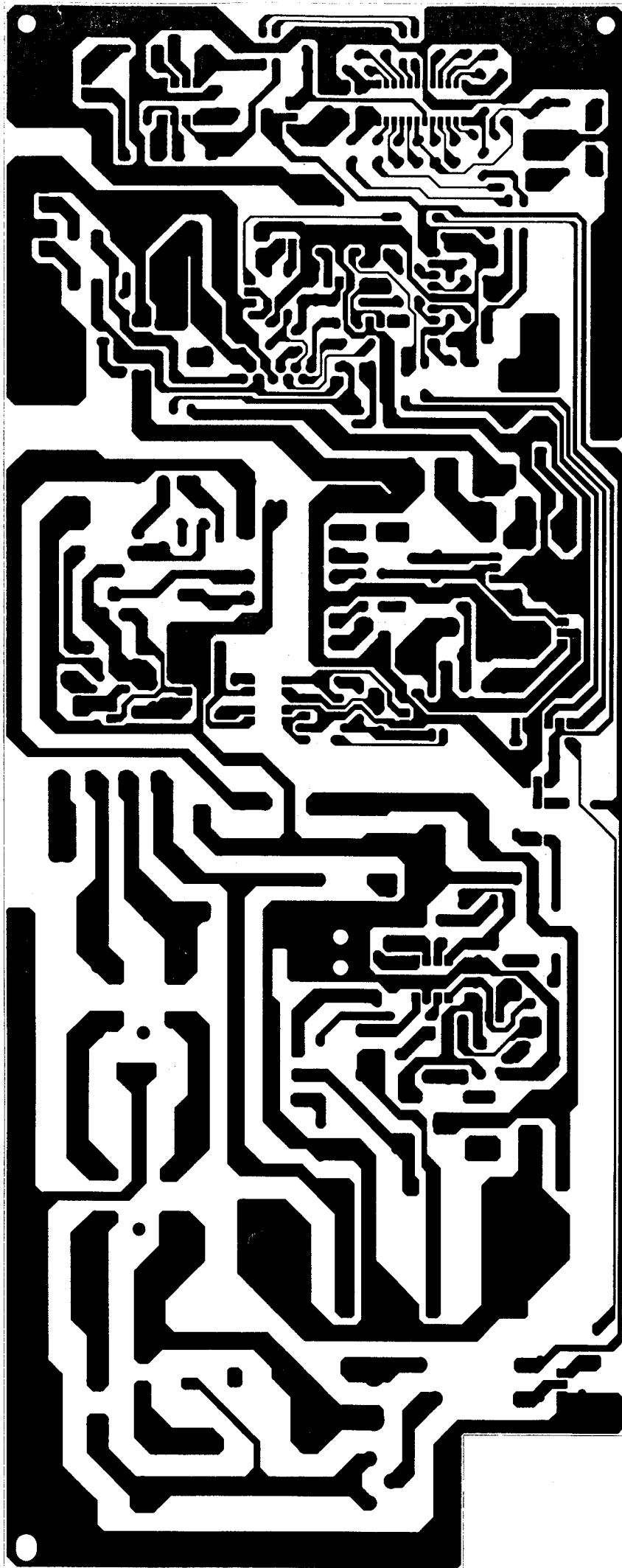
| | | |
|------------|---------------------|--|
| RCF10218J2 | RCF 1K 1/8W J ATP | RA08,RA18,RA28,RA35,RA36,RA45,RA46,RA72,RA77, RB05,RB06,RB62,RC01,RC03 |
| RCF10318J2 | RCF 10K 1/8W J ATP | RA01,RA02,RA11,RA12,RA21,RA22,RA63,RA75,RA76, RA81,RA90,RB10,RB25,RB33,RB39,RB44,RB69,RB71, RB73 |
| RCF10418J2 | RCF 100K 1/8W J ATP | RB21,RB34,RB51,RB55,RB63,RB64 |
| RCF10518J2 | RCF 1M 1/8W J ATP | RB53,RB59 |
| RCF11218J2 | RCF 1.1K 1/8W J ATP | RB07,RB08 |
| RCF12518J2 | RCF 1.2M 1/8W J ATP | RB58 |
| RCF13218J2 | RCF 1.3K 1/8W J ATP | RA69 |
| RCF15214J2 | RCF 1.5K 1/4W J ATP | RB37 |
| RCF15218J2 | RCF 1.5K 1/8W J ATP | RA71 |
| RCF16318J2 | RCF 16K 1/8W J ATP | RB28 |
| RCF18118J2 | RCF 180 1/8W J ATP | RA31,RA41 |
| RCF18218J2 | RCF 1.8K 1/8W J ATP | RA70 |
| RCF18318J2 | RCF 18K 1/8W J ATP | RA06,RA16,RA26 |
| RCF20218J2 | RCF 2K 1/8W J ATP | RA95,RC39 |
| RCF20318J2 | RCF 20K 1/8W J ATP | RB22,RB29,RB35,RB52,RB65 |
| RCF22114J2 | RCF 220 1/4W J ATP | RA33,RA43 |
| RCF22218J2 | RCF 2.2K 1/8W J ATP | RA05,RA15,RA25,RA93,RB23,RB36 |
| RCF22318J2 | RCF 22K 1/8W J ATP | RA83 |
| RCF24014J2 | RCF 24 1/4W J ATP | RA09,RA19,RA29 |
| RCF30218J2 | RCF 3K 1/8W J ATP | RA32,RA42,RA61 |
| RCF33018J2 | RCF 33 1/8W J ATP | RA89,RA92 |
| RCF33118J2 | RCF 330 1/8W J ATP | RB40,RB41 |
| RCF33218J2 | RCF 3.3K 1/8W J ATP | RA67,RA68,RB30 |
| RCF36218J2 | RCF 3.6K 1/8W J ATP | RA66 |
| RCF36318J2 | RCF 36K 1/8W J ATP | RB60 |
| RCF39114J2 | RCF 390 1/4W J ATP | RA07,RA17,RA27 |
| RCF39118J2 | RCF 390 1/8W J ATP | RB56,RB61 |
| RCF39218J2 | RCF 3.9K 1/8W J ATP | RA64 |
| RCF39418J2 | RCF 390K 1/8W J ATP | RA87,RB57 |
| RCF43118J2 | RCF 430 1/8W J ATP | RB26,RB31 |
| RCF43218J2 | RCF 4.3K 1/8W J ATP | RB27 |
| RCF47018J2 | RCF 47 1/8W J ATP | RB01,RB02 |
| RCF47114J2 | RCF 470 1/4W J ATP | RA03,RA13,RA23,RA34,RA38,RA44,RA48 |

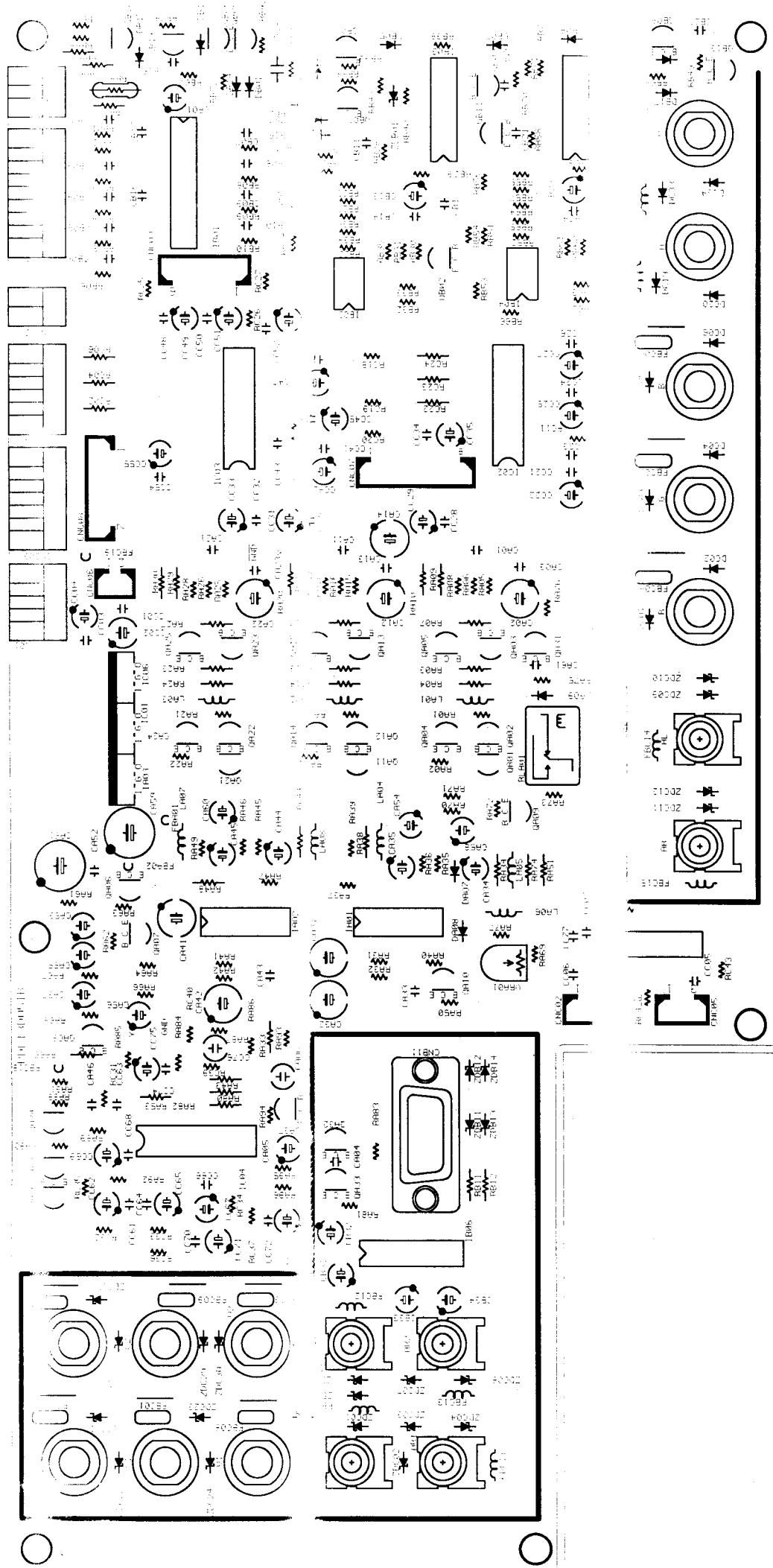
| | | |
|------------|--|---|
| RCF47218J2 | RCF 4.7K 1/8W J ATP | RA37,RA47,RA62,RA94,RB38,RB43,RB68,RB70,RB72 |
| RCF47318J2 | RCF 47K 1/8W J ATP | RB67 |
| RCF47418J2 | RCF 470K 1/8W J ATP | RC11,RC21,RC31 |
| RCF47B18J2 | RCF 0.47 1/8W J ATP | RC41 |
| RCF51114J2 | RCF 510 1/4W J ATP | RC22,RC23,RC24 |
| RCF51318J2 | RCF 51K 1/8W J ATP | RC40 |
| RCF51418J2 | RCF 510K 1/8W J ATP | RB09 |
| RCF51A14J2 | RCF 5.1 1/4W J ATP | RC02,RC04,RC06 |
| RCF56114J2 | RCF 560 1/4W J ATP | RA04,RA14,RA24 |
| RCF56118J2 | RCF 560 1/8W J ATP | RA40 |
| RCF56218J2 | RCF 5.6K 1/8W J ATP | RA88,RA91,RA96 |
| RCF75018J2 | RCF 75 1/8W J ATP | RC12,RC13,RC14,RC25,RC26,RC27,RC32,RC33,RC34,RC35,RC36,RC37 |
| RCF75112J2 | RCF 750 1/2W J ATP | RB45 |
| RCF75118J2 | RCF 750 1/8W J ATP | RB24,RB32,RB54 |
| RCF82114J2 | RCF 820 1/4W J ATP | RA65 |
| RCF82118J2 | RCF 820 1/8W J ATP | RA50 |
| RCF91318J2 | RCF 91K 1/8W J ATP | RB66 |
| RM316014F2 | RMF 316 1/4W F ATP | RA74 |
| RM430314F2 | RMF 430K 1/4W F ATP | RA82 |
| RM510A18F2 | RMF 51 1/8W F ATP | RA73 |
| RM596014F2 | RMF 596 1/4W F ATP | RA51 |
| RM680A18F2 | RMF 68 1/8W F ATP | RA39 |
| RM976018F2 | RMF 976 1/8W F ATP | RA49 |
| VR102B0310 | VR 1KB RVM06HP03-1 | VRA01 |
| ZFT0000800 | EMI FILTER DNF-330TA | FBC01,FBC02,FBC03,FBC04,FBC05,FBC06,FBC07,FBC08,FBC09 |
| ZRY1201510 | RELAY OUAZ-SH-112L 12V 1A OEG | RLA01 |
| AADL150070 | ASS'Y CONTROL BD (AF3.0HD) | |
| CA10110M45 | CA 100U 10V M 105°C RTF5 | CA404 |
| CD10450K85 | CD 0.1U 50V K 3-Y5U RTF5 | CA401,CA402,CA403 |
| DLEDGA0213 | LED GREEN/AMBER L-119YGW R KB | LED2 |
| DLEDGG0613 | LED GREEN L-113GDT R KB | LED1 |
| DLEDRR0313 | LED RED L-113IDT R KB | LED3 |
| H170000410 | LED HOLDER LED-4 PG | LED1,LED3 |
| H170000510 | LED HOLDER LED-4*3A PG | LED2 |
| KH00003300 | H WIRE*10 #24 1007 (BD-IN & CONN.) 220mm | CNA401-CN209,CNA402-CN210 |
| KS00000501 | S WIRE*1 #24 2547 (BD-IN&CONN.) 220mm | CNA403-I205 |
| PDL13S0410 | CONTROL PCB (UHD-3200) | |
| RCF22014J2 | RCF 22 1/4W J ATP | RA401 |

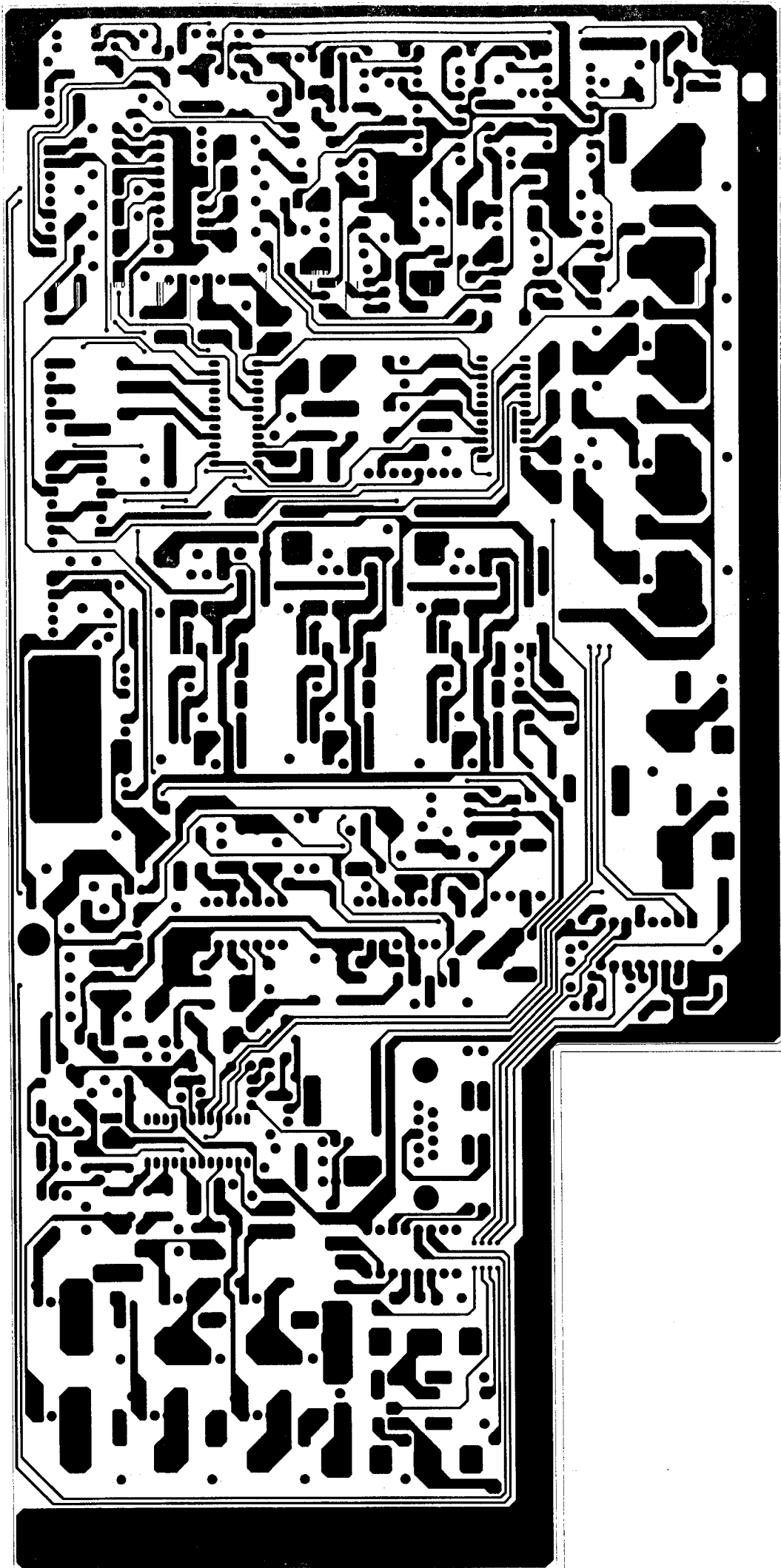
| | | |
|------------|-----------------------------------|--|
| RCF47218J2 | RCF 4.7K 1/8W J ATP | RA403,RA404 |
| RM110118F2 | RMF 1.10K 1/8W F ATP | RA407 |
| RM130118F2 | RMF 1.30K 1/8W F ATP | RA405 |
| RM150118F2 | RMF 1.50K 1/8W F ATP | RA406 |
| RM180118F2 | RMF 1.80K 1/8W F ATP | RA408 |
| ZIR0004113 | IR KODENSHI PIC-28043TE2 R | IRA401 |
| ZTS0001310 | TACT SW SUPER DARTER TSP62011 H50 | SWA401,SWA402,SWA403, SWA404,SWA405,SWA406, SWA407 |
| AADL150080 | ASS'Y CLAMP BD (AF3.0HD) | |
| A0HC453810 | IC 74HC4538N DIP PHILIPS | ID01 |
| CA22125M15 | CA 220U 25V M RTF5 | CD01 |
| CD10450K85 | CD 0.1U 50V K 3-Y5U RTF5 | CD02 |
| CP10250G55 | CP 1000P 50V G PPN RTF5 | CD03,CD04 |
| DZ0HZ5C102 | ZENER HZ5C1 ATP | ZDD01 |
| FM00200200 | CONN.MALE 2P 2.5mm W*4 | CND01,CND04 |
| FM00300200 | CONN.MALE 3P 2.5mm W*4 | CND02,CND03 |
| PDL13S0610 | CLAMP PCB (UHD-3200) | |
| RCF10118J2 | RCF 100 1/8W J ATP | RD06,RD11 |
| RCF10318J2 | RCF 10K 1/8W J ATP | RD05,RD07 |
| RCF20318J2 | RCF 20K 1/8W J ATP | RD03,RD09 |
| RCF33118J2 | RCF 330 1/8W J ATP | RD04,RD08 |
| RCF68012J2 | RCF 68 1/2W J ATP | RD01 |
| RM130118F2 | RMF 1.30K 1/8W F ATP | RD10 |
| RM267118F2 | RMF 2.67K 1/8W F ATP | RD02 |

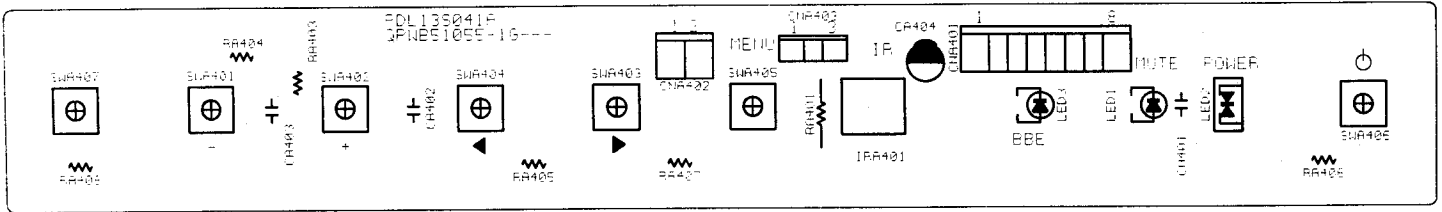


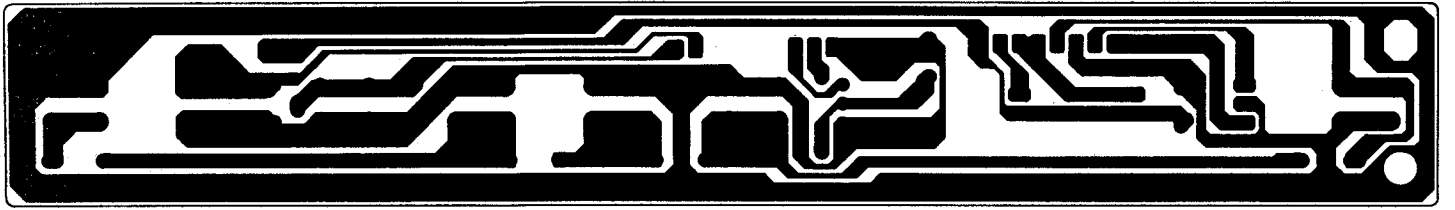
WARNING:
 FOR CONTINUED PROTECTION AGAINST RISK OF FIRE REPLACE
 ONLY WITH SAME TYPE AND RATING OF FUSE

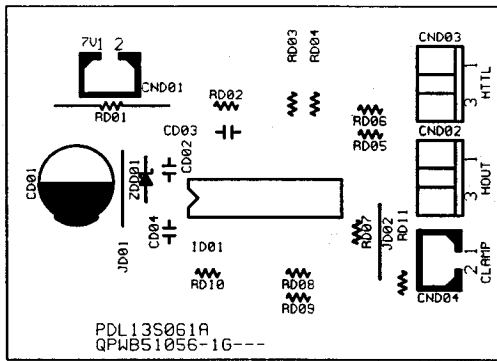


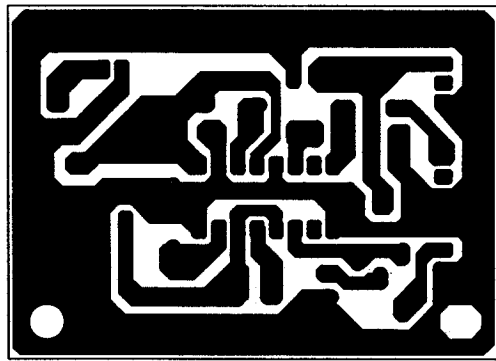


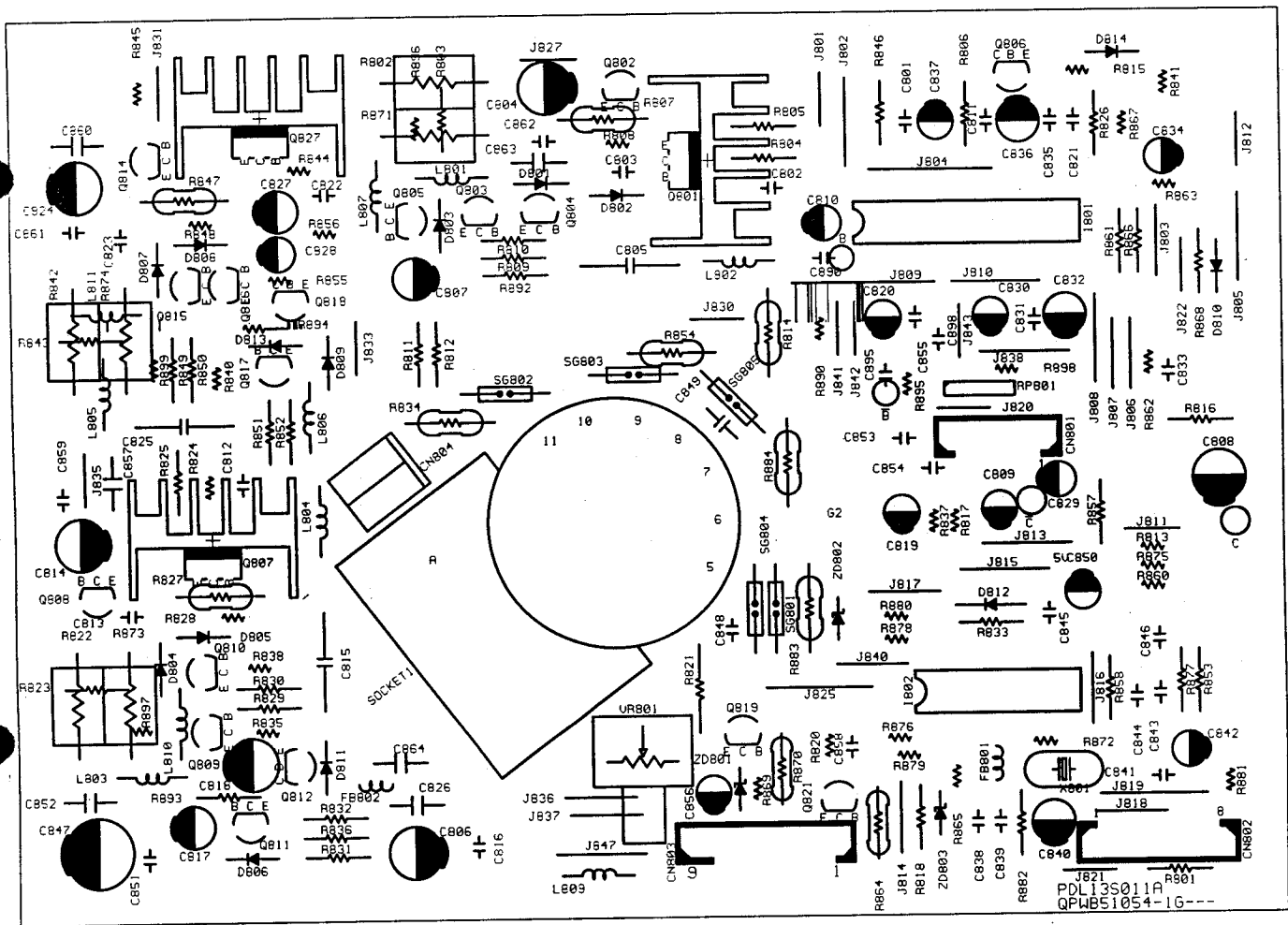


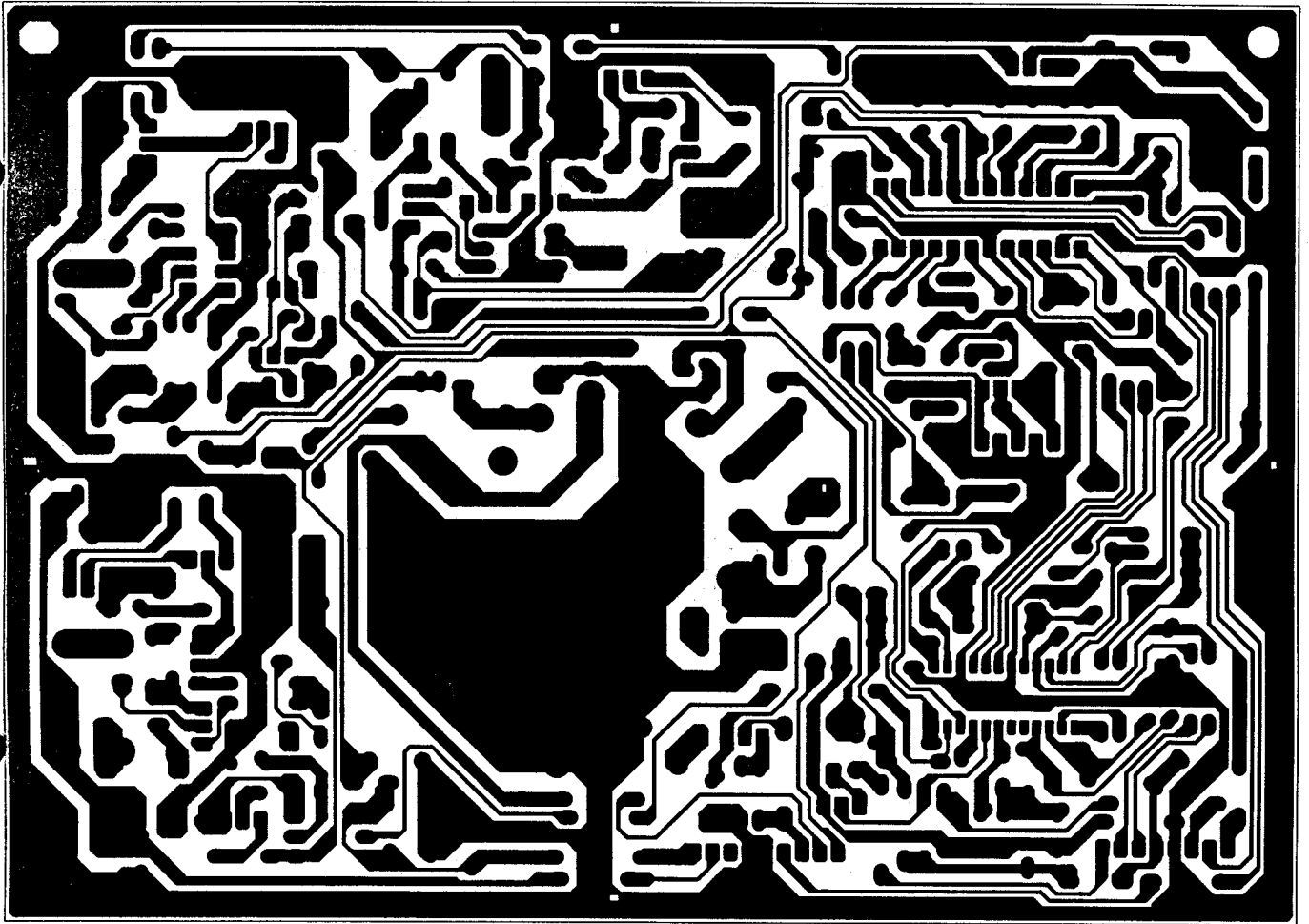


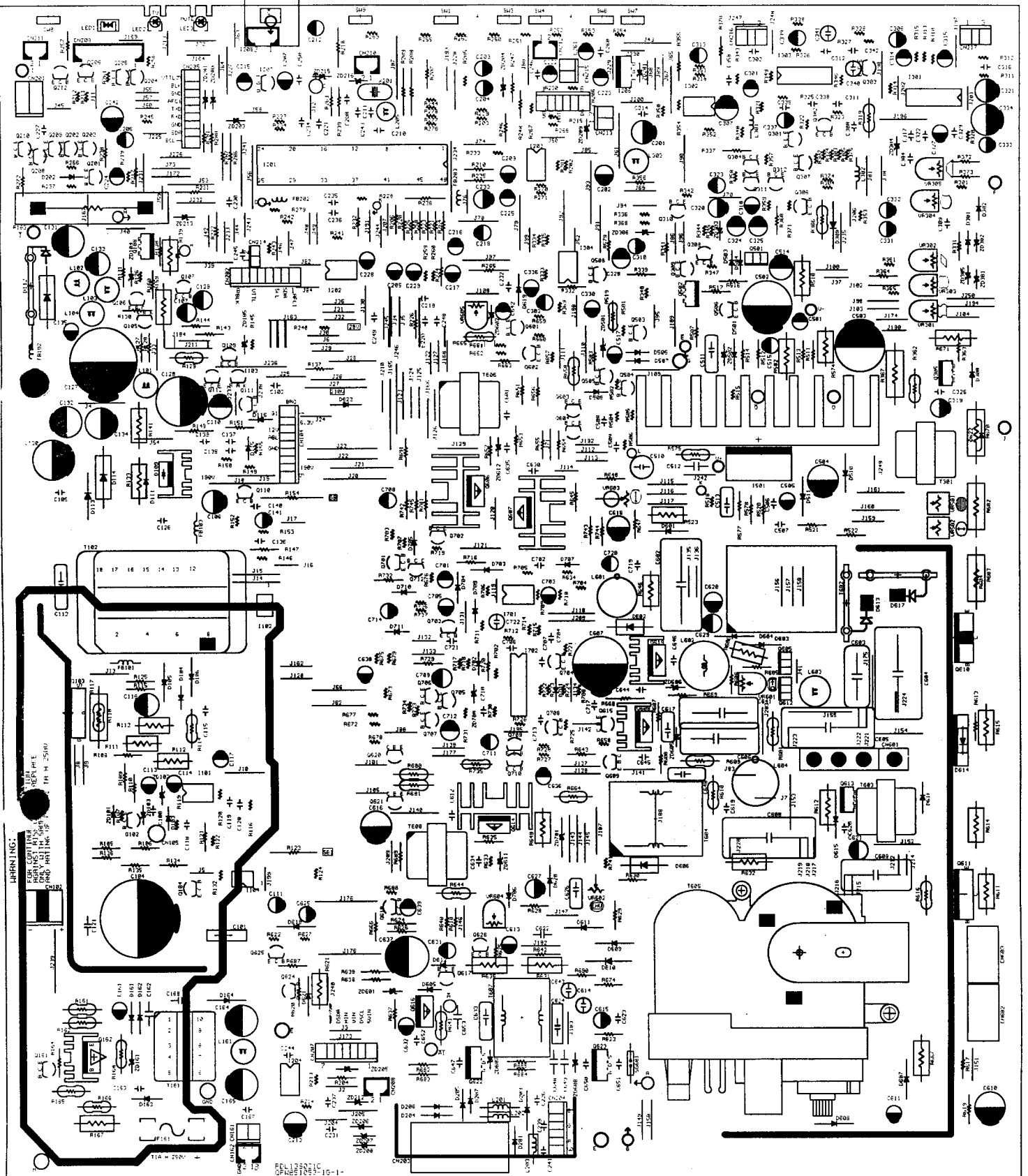


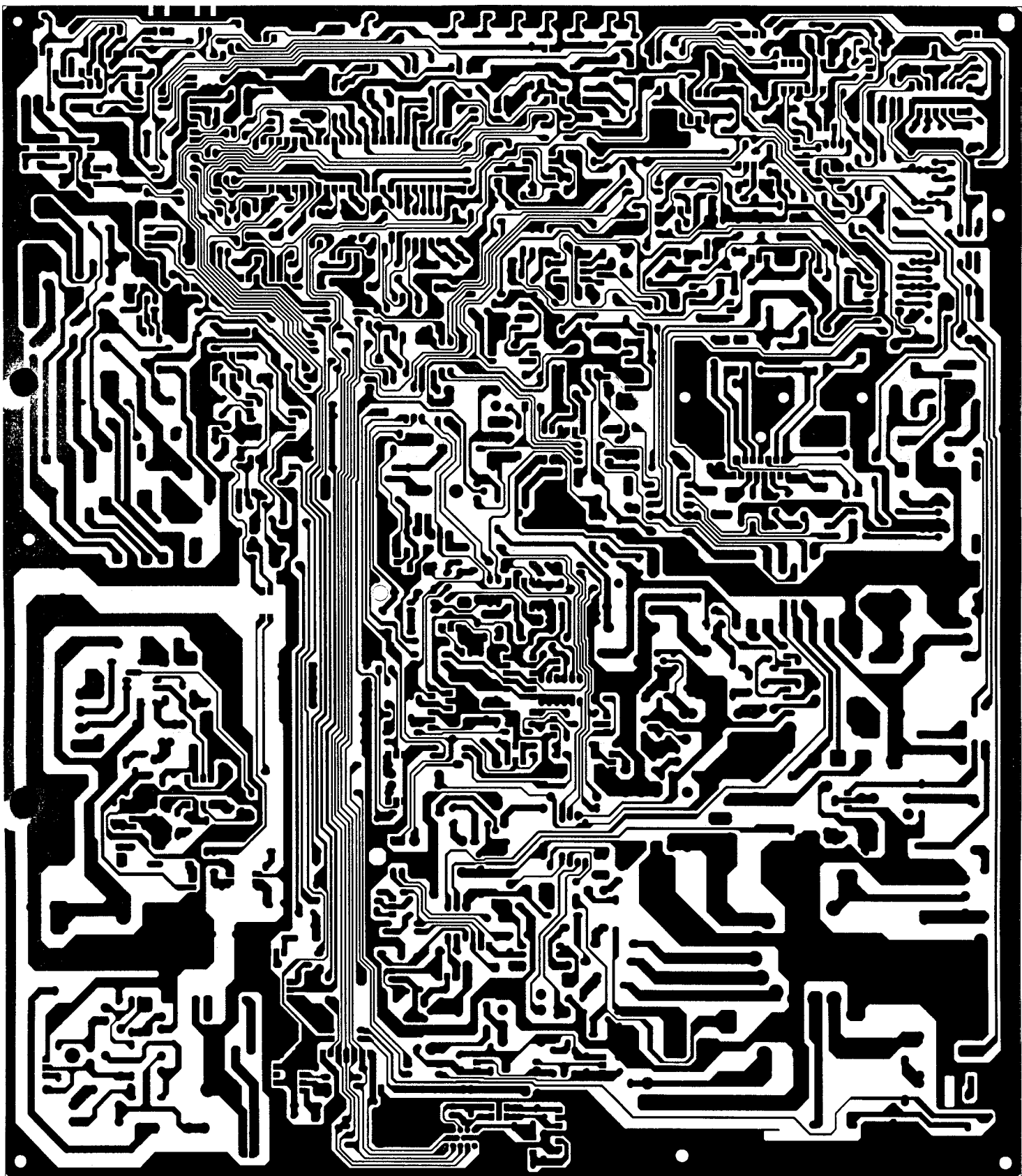


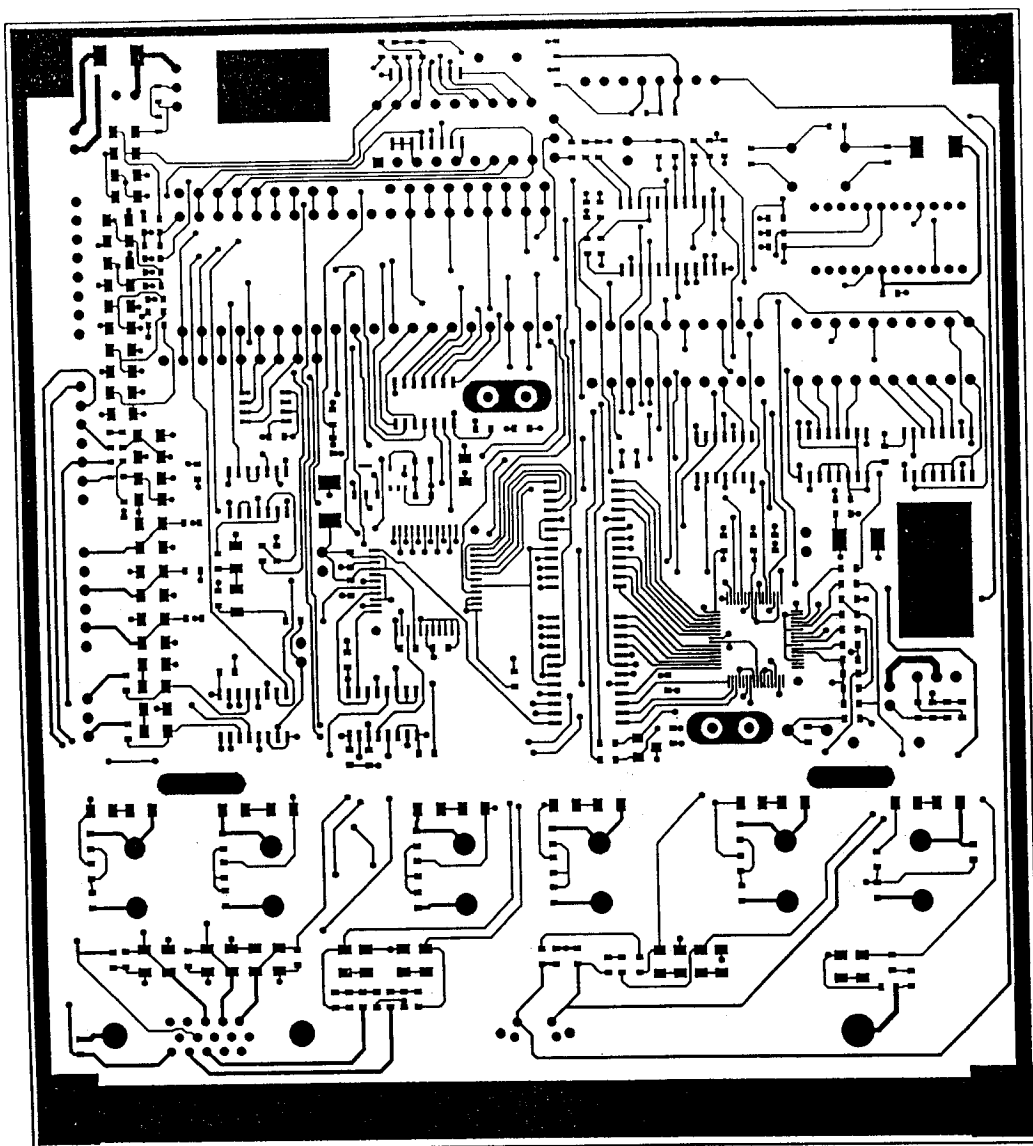


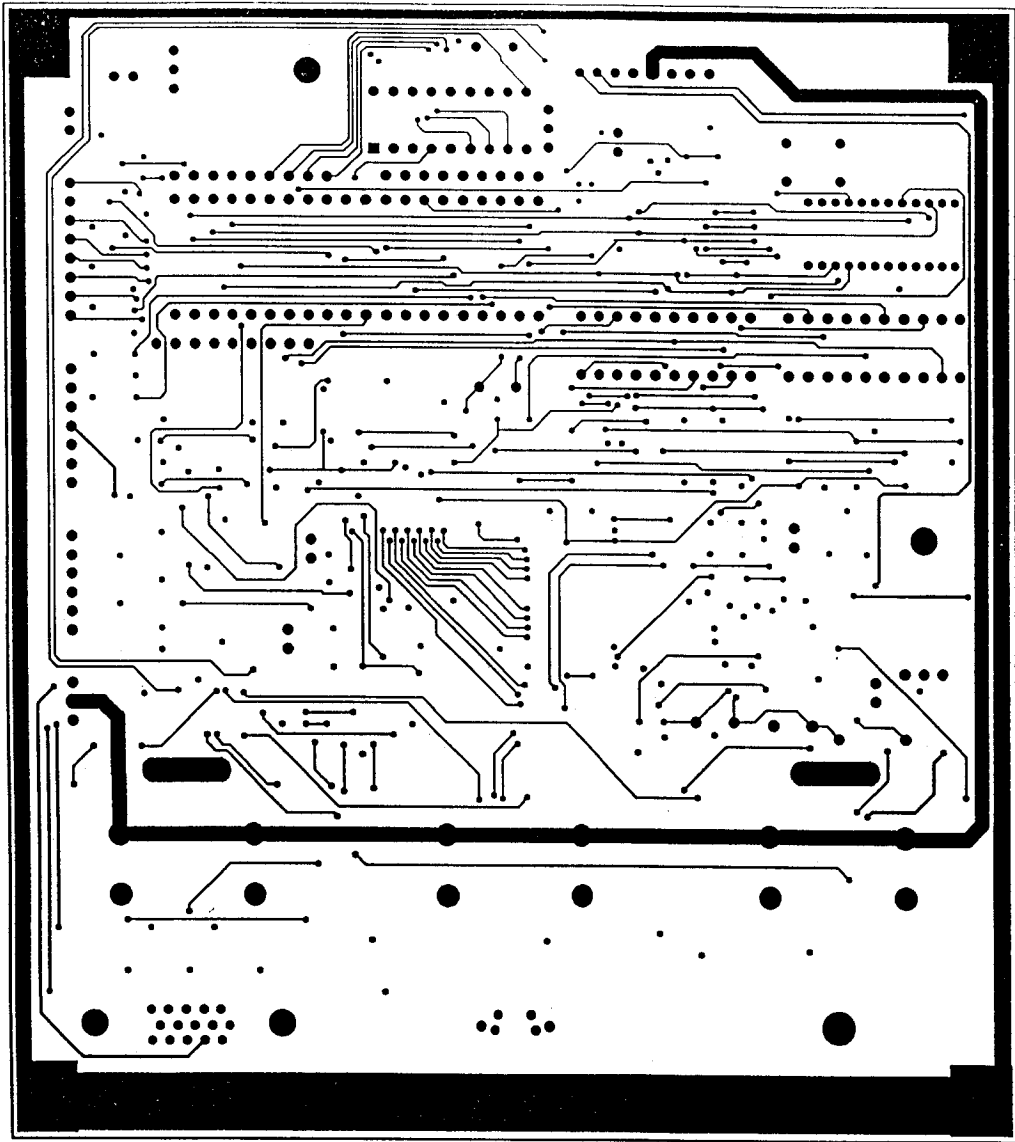


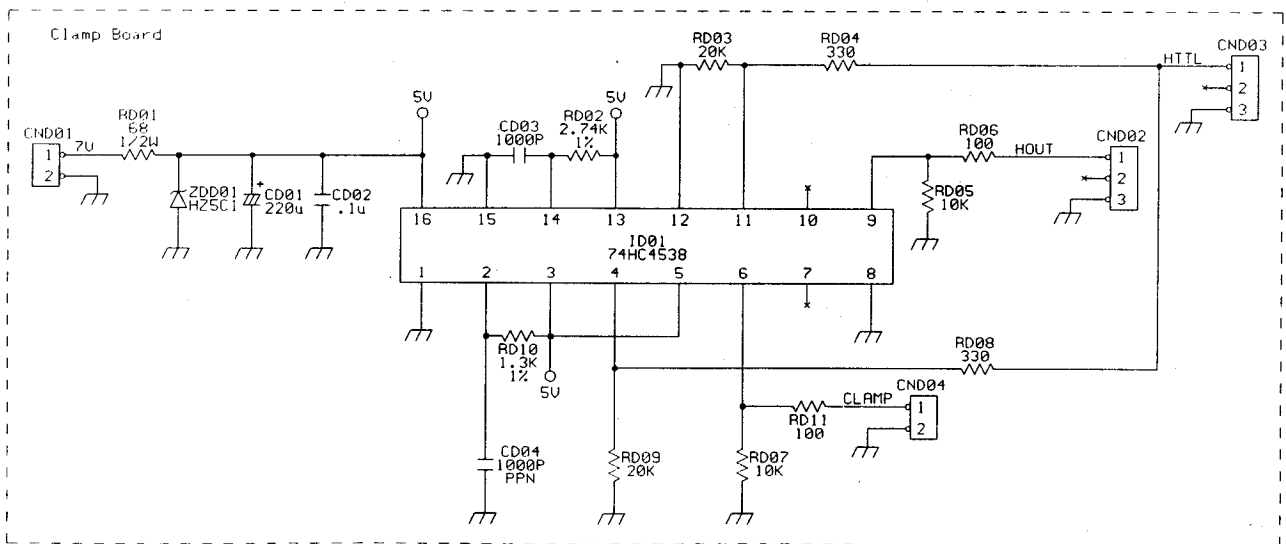
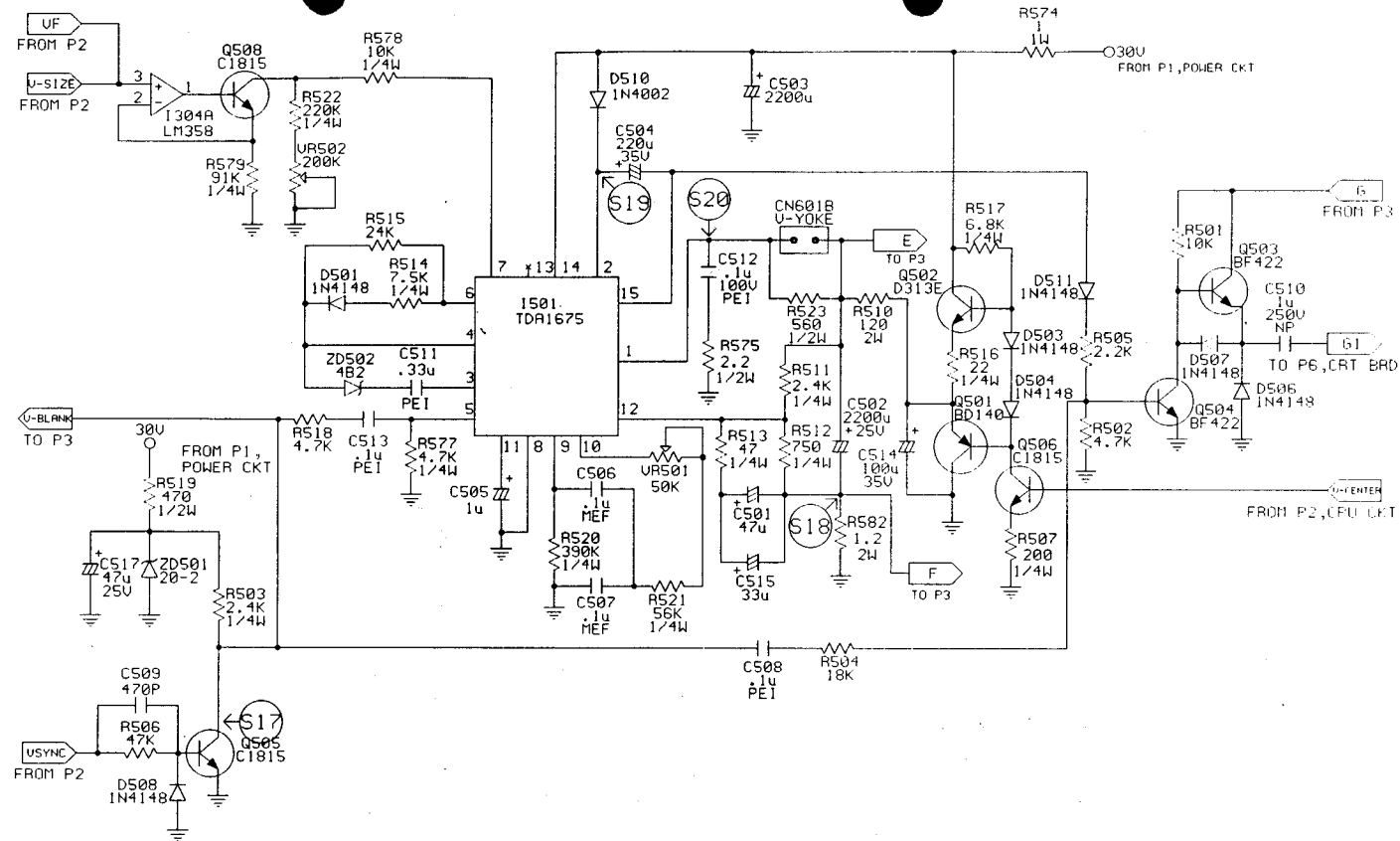




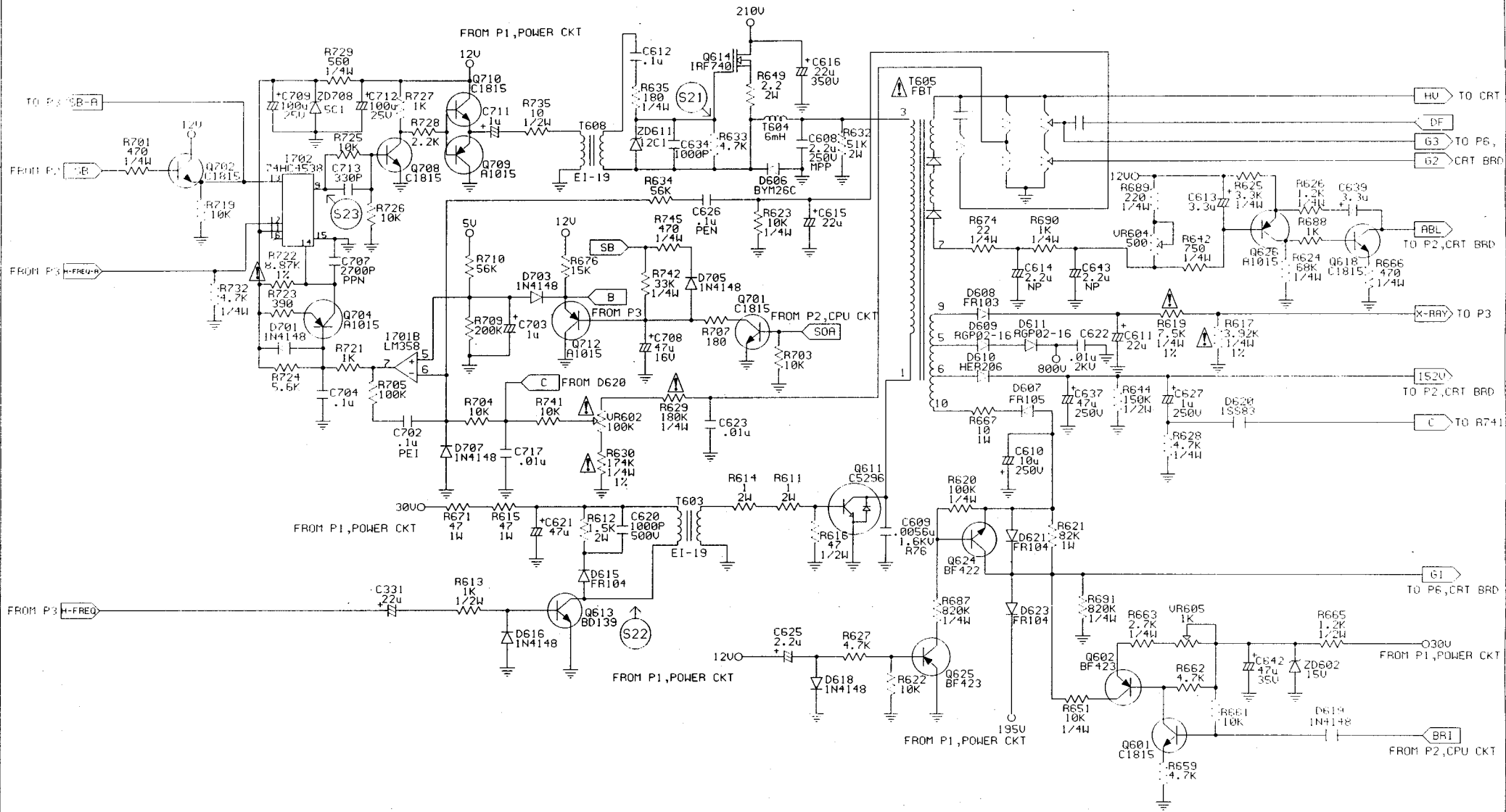




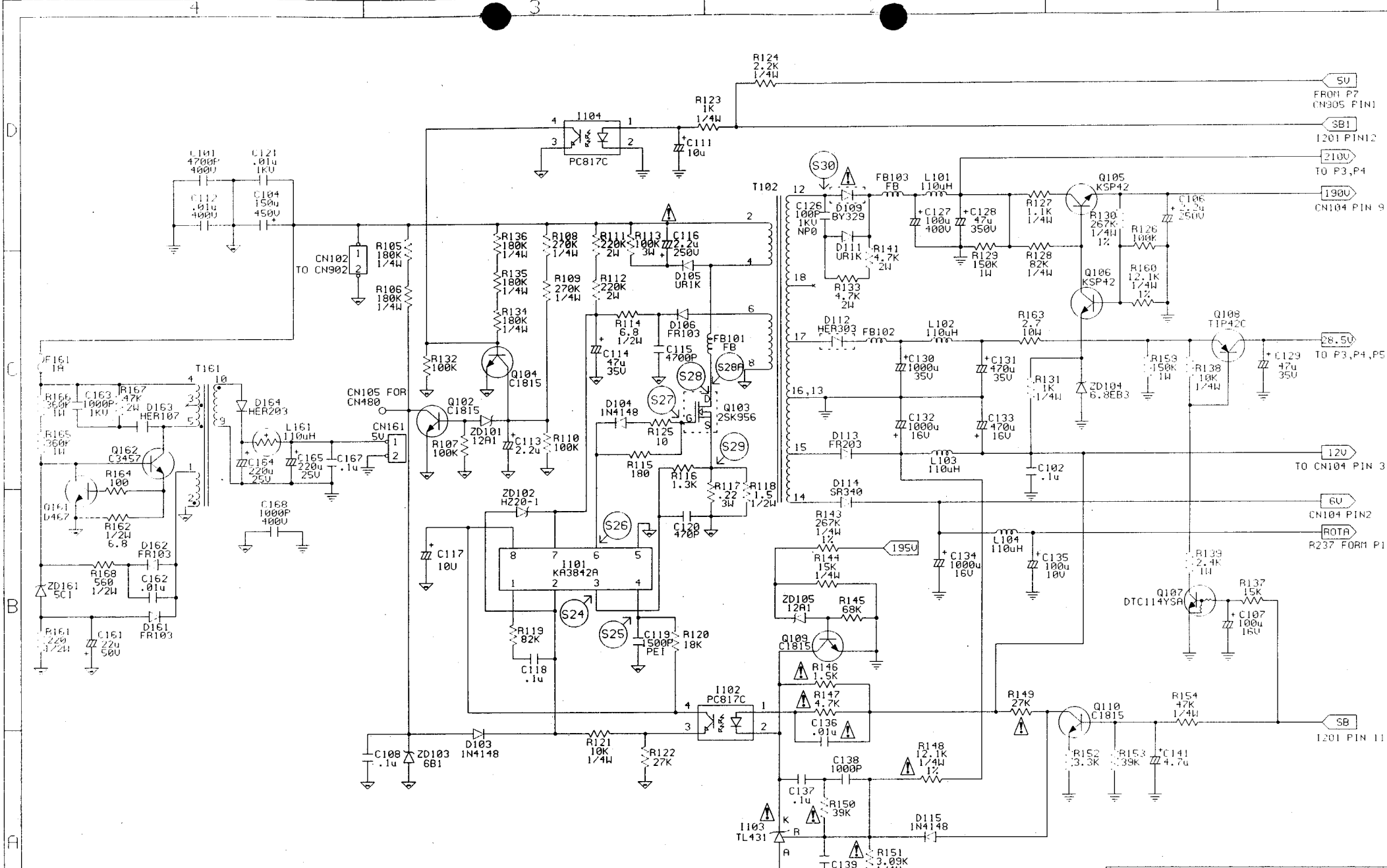




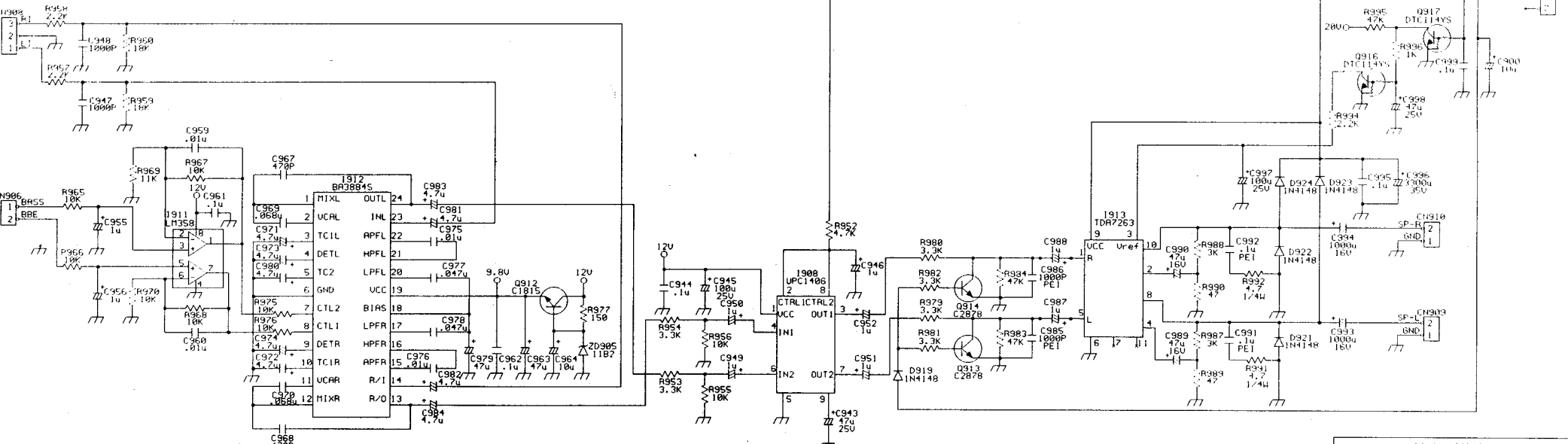
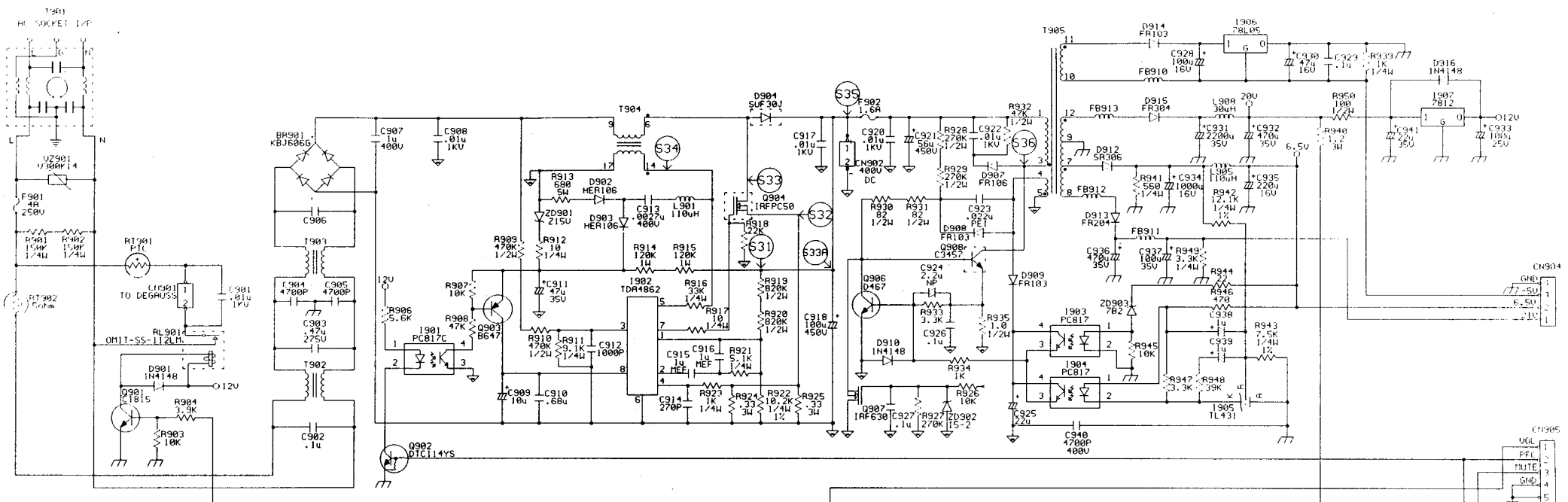
| DIVA LABORATORIES | | | |
|-------------------|------|---------------------------|-----------------|
| DRAW | MOMO | Title | |
| CHK | | UHD-3200 VERTICAL & CLAMP | |
| APRD | | SIZE | DOCUMENT NUMBER |
| | | Date: | REV |
| | | 1998-10-30 | 0 |
| | | Sheet 4 of 10 | |



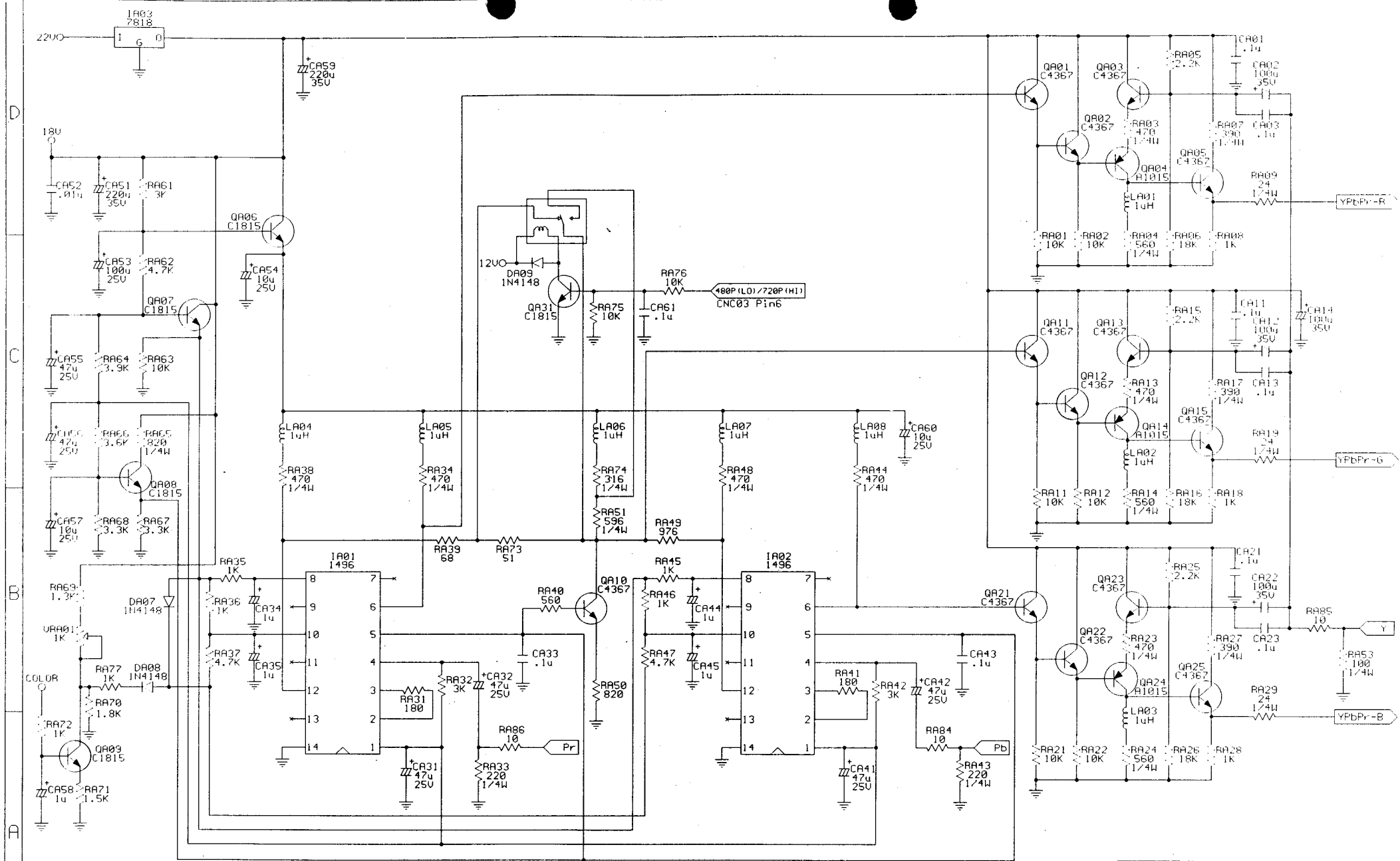
| | | | | |
|-------------------|------|-------------|-----------------|---------------|
| DIVA LABORATORIES | | | | |
| DRAW | MOMD | Title | | |
| | | UHD-3200 HV | | |
| CHK | | SIZE | DOCUMENT NUMBER | REV 1 |
| APRD | | Date: | 1998-12-14 | Sheet 5 of 10 |



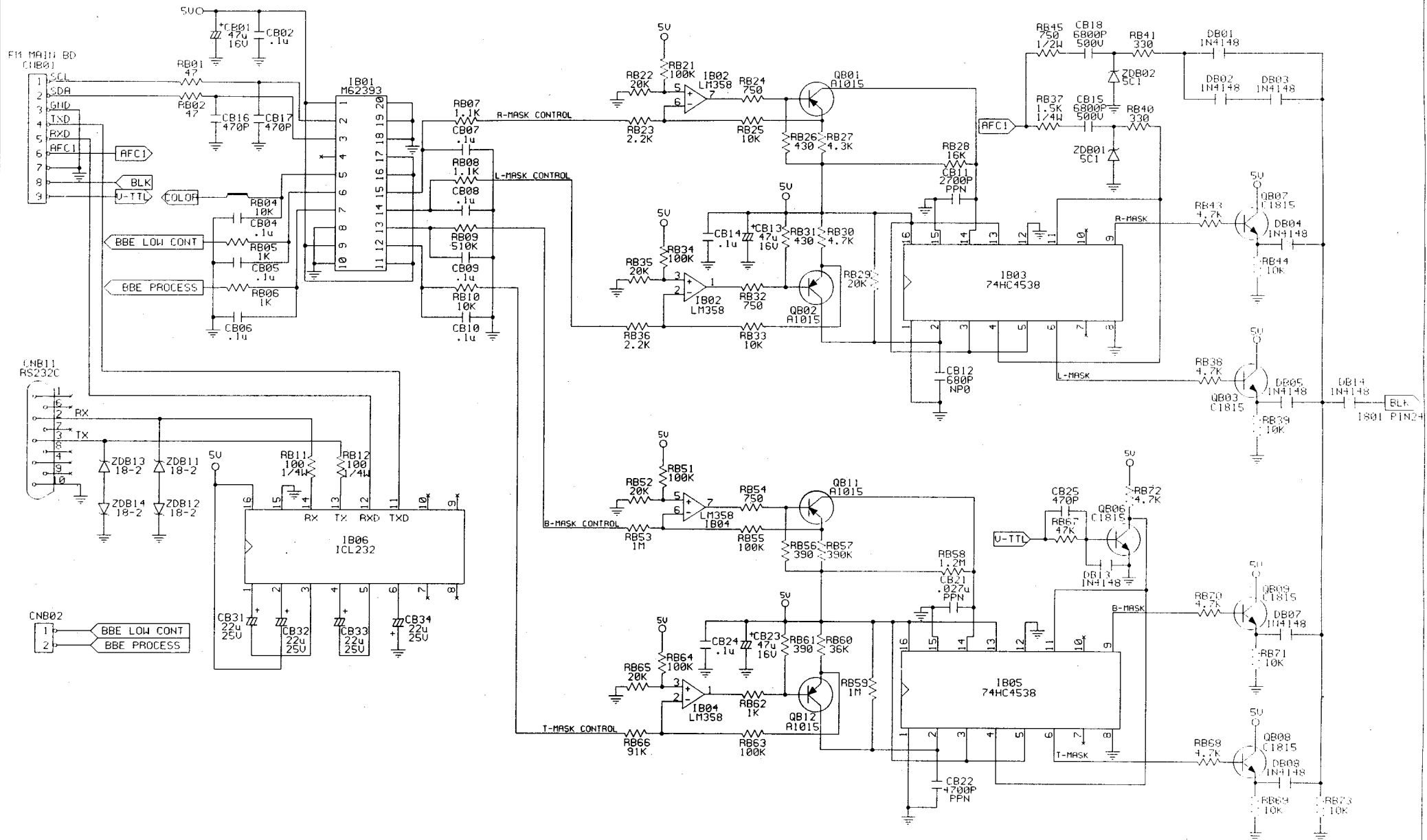
| DIVA LABORATORIES | | | | |
|-------------------|------|-------|-----------------|---------------|
| DRAW | MOMO | Title | | UHD-3200 |
| | | | | POWER SECTION |
| CHK | | SIZE | DOCUMENT NUMBER | REV |
| | | | PILOT RUN | 0 |
| APRD | | Date: | 1998-12-14 | Sheet 6 of 10 |



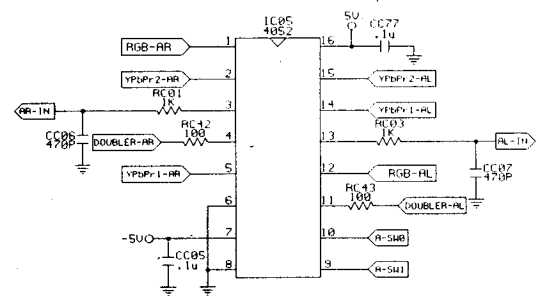
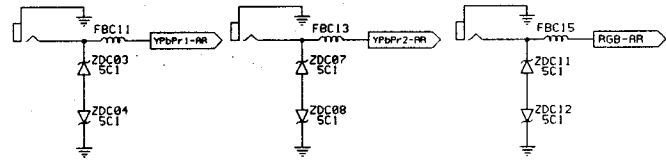
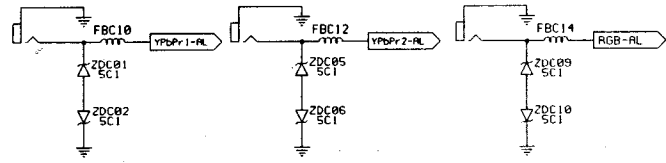
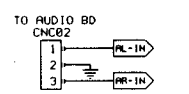
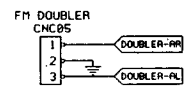
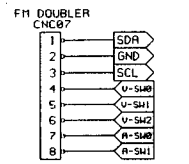
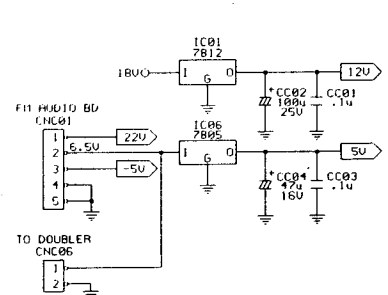
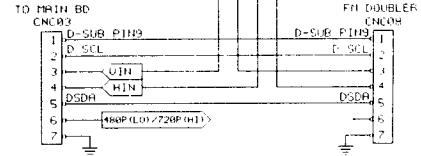
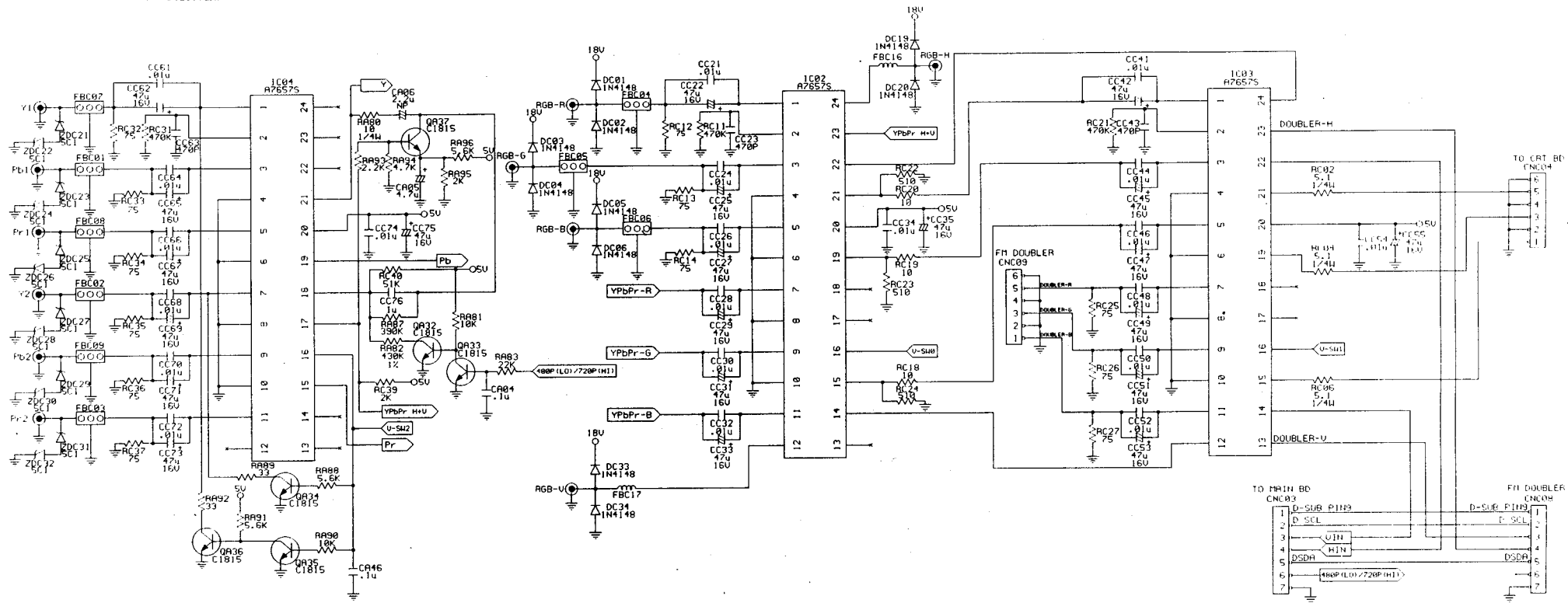
| DIVA LABORATORIES | | | |
|-------------------|--------|------------------|---------------------------------|
| DRHW | MAGGIE | Title | UHQ-3200 PFC & AUDIO SECTION |
| CHK | | SIZE | DOCUMENT NUMBER |
| APRO | | Date: 1998-09-14 | Sheet 7 of 10 |



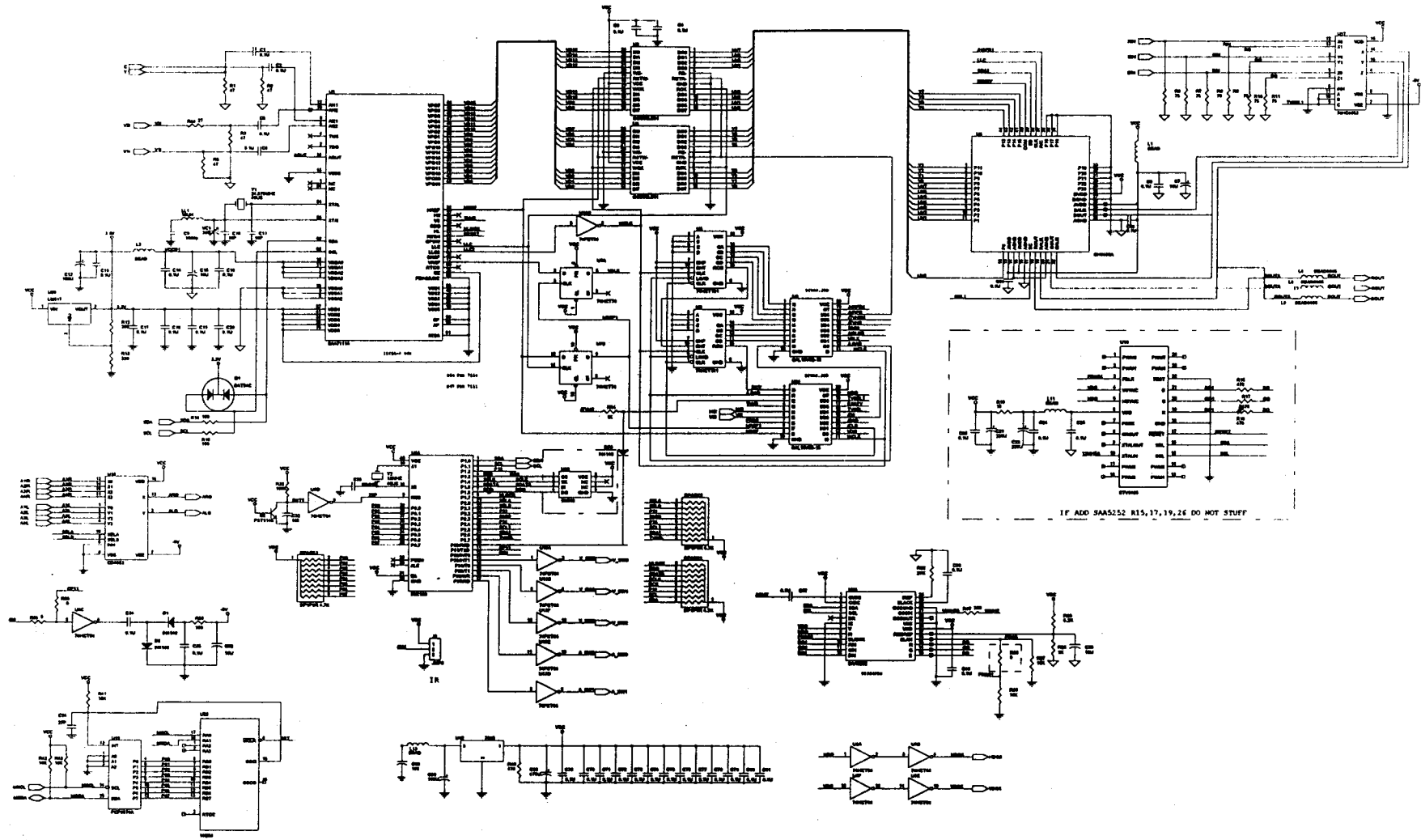
| | | | |
|-------------------|--|-----------------|-------|
| DIVA LABORATORIES | | | |
| DRW | Title UHD-3200 SYNC-A YUU->RGB CIRCUIT | | |
| CHK | SIZE | DOCUMENT NUMBER | REV B |
| APRD | Date: 1998-11-06 | Sheet 8 of 10 | |



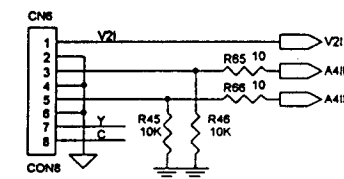
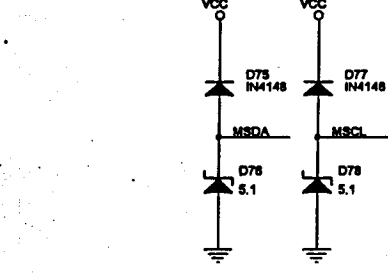
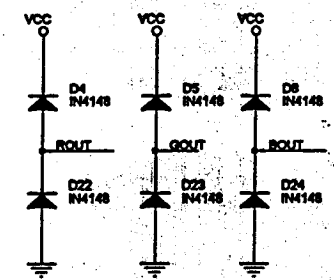
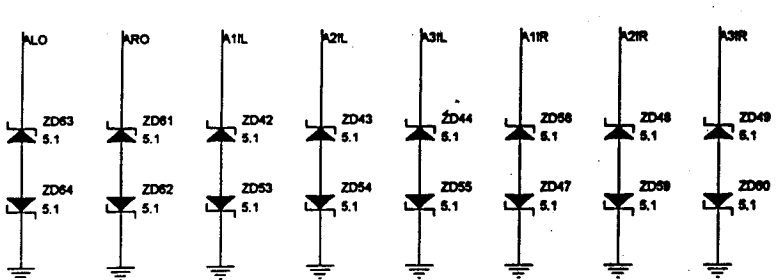
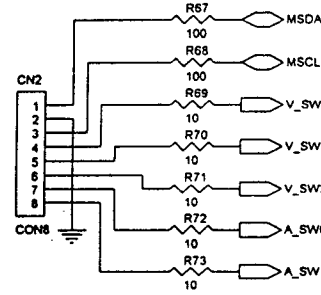
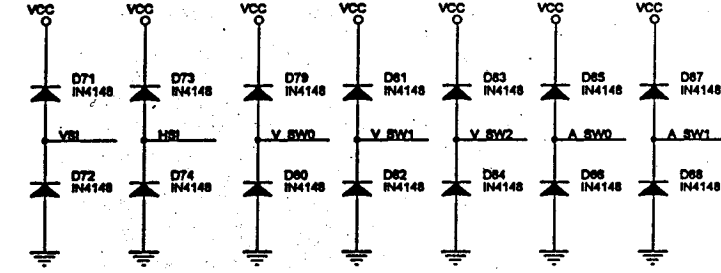
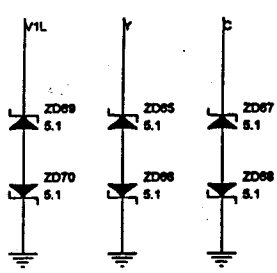
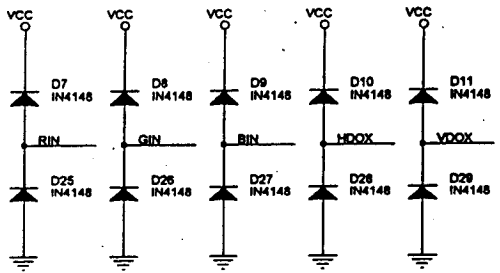
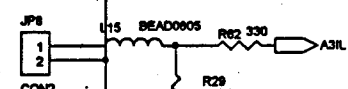
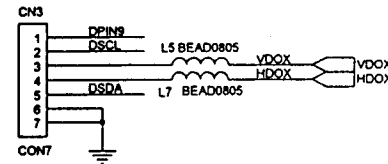
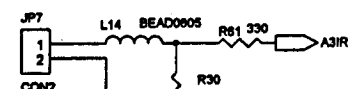
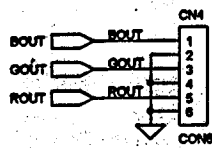
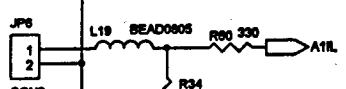
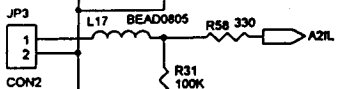
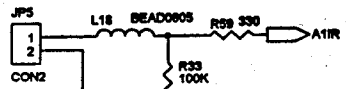
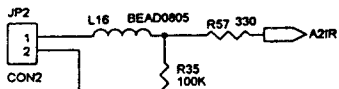
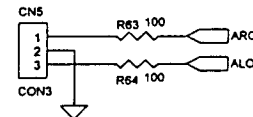
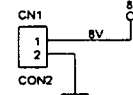
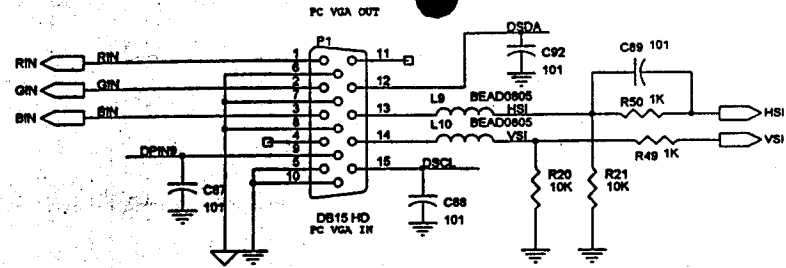
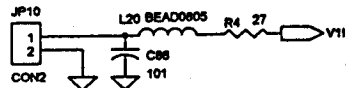
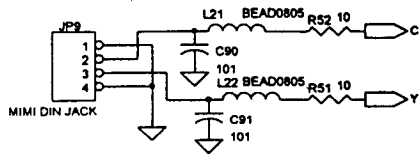
| DINA LABORATORIES | | | |
|-------------------|--|-------|------------------------------|
| DRAW | | Title | UHD-3200 SYNC-B MASK CIRCUIT |
| CHK | | SIZE | DOCUMENT NUMBER |
| APRD | | Date | 1998-11-06 |
| | | Sheet | 9 of 10 |



| DINA LABORATORIES | | | |
|-------------------|---|-----------------|----------|
| DRAW | Title UMD-3200 SYNC-C VIDEO SWITCH CIRCUIT | | |
| CHK | SIZE A2 | DOCUMENT NUMBER | REV B |
| APPD | Date: 1998-11-06 | Sheet 10 | of 10 |

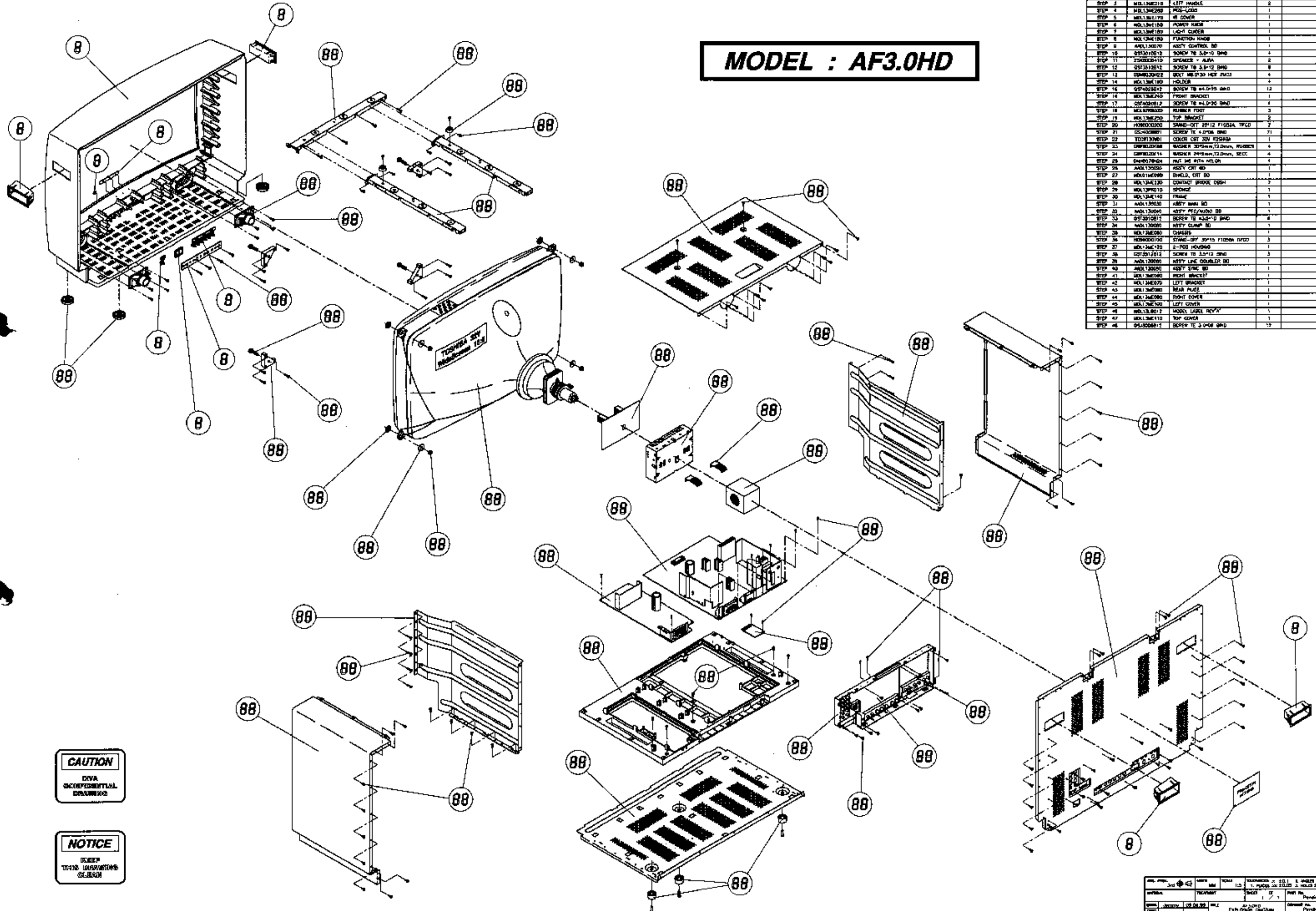


IF ADD SAAS52 R15,17,19,26 DO NOT STUFF



| | | |
|--------|---------------------------|--------------|
| File | | |
| DIVATV | | |
| Size | Document Number | Rev |
| B | CON | 1.0 |
| Date: | Monday, November 09, 1998 | Sheet 2 of 2 |

MODEL : AF3.0HD



| STEP NO. | PART NO. | DESCRIPTION | QTY | REMARKS |
|----------|------------|------------------------------|-----|---------|
| STEP 1 | MOL136130 | WELD | | |
| STEP 2 | MOL136200 | RIGHT HANDLE | 2 | |
| STEP 3 | MOL136210 | LEFT HANDLE | 2 | |
| STEP 4 | MOL136280 | POW-LCD | 1 | |
| STEP 5 | MOL136170 | W COVER | 1 | |
| STEP 6 | MOL136180 | POWER HUB | 1 | |
| STEP 7 | MOL136180 | LAG-1 COVER | 1 | |
| STEP 8 | MOL136180 | FUNCTION HUB | 1 | |
| STEP 9 | MOL136070 | ASSY CONTROL BO | 1 | |
| STEP 10 | SP3010812 | SCREW T6 3.0*10 BHD | 4 | |
| STEP 11 | SP3002810 | SPWASER - ALUM | 2 | |
| STEP 12 | SP3010812 | SCREW T6 3.0*12 BHD | 8 | |
| STEP 13 | SP4002812 | SCREW T6 3.0*12 LCP BHD | 4 | |
| STEP 14 | MOL136180 | WELDER | 1 | |
| STEP 15 | SP4002812 | SCREW T6 3.0*12 BHD | 12 | |
| STEP 16 | MOL136180 | FRONT BRACKET | 1 | |
| STEP 17 | SP4002812 | SCREW T6 3.0*12 BHD | 1 | |
| STEP 18 | MOL136030 | RIBBER FOOT | 3 | |
| STEP 19 | MOL136270 | TOP BRACKET | 2 | |
| STEP 20 | MOL136030 | SHAW-OFF 20*12 FIBER WOOD | 2 | |
| STEP 21 | DS-4008001 | SCREW T6 4.0*8 BHD | 21 | |
| STEP 22 | YD0130001 | COVER CRT 20" FISHB | 1 | |
| STEP 23 | CPM0020008 | WASHER 20*10*1.5 Dmm. RUBBER | 4 | |
| STEP 24 | CPM0020014 | WASHER 20*10*1.5 Dmm. SECC | 4 | |
| STEP 25 | CPM0020004 | NUT 10*10*1.5 Dmm. RUBBER | 4 | |
| STEP 26 | MOL136030 | ASSY CRT BO | 1 | |
| STEP 27 | MOL136090 | SHIELD CRT BO | 1 | |
| STEP 28 | MOL136130 | CONTACT BRIDGE 0804 | 2 | |
| STEP 29 | MOL136110 | SPONGE | 1 | |
| STEP 30 | MOL136140 | FRAME | 1 | |
| STEP 31 | MOL136030 | ASSY MAIN BO | 1 | |
| STEP 32 | MOL136040 | ASSY PFC/WIND BO | 1 | |
| STEP 33 | SP3010812 | SCREW T6 3.0*12 BHD | 4 | |
| STEP 34 | MOL136080 | ASSY CLAMP BO | 1 | |
| STEP 35 | MOL136080 | CHASSIS | 1 | |
| STEP 36 | MOL1360100 | STAND-OFF 20*15 FIBER WOOD | 3 | |
| STEP 37 | MOL136120 | 2-PCB HOUSING | 1 | |
| STEP 38 | SP3010812 | SCREW T6 3.0*12 BHD | 3 | |
| STEP 39 | MOL136080 | ASSY LINE COUPLER BO | 1 | |
| STEP 40 | MOL136050 | ASSY SYNC BO | 1 | |
| STEP 41 | MOL136070 | RIGHT BRACKET | 1 | |
| STEP 42 | MOL136070 | LEFT BRACKET | 1 | |
| STEP 43 | MOL136080 | REAR PLATE | 1 | |
| STEP 44 | MOL136090 | RIGHT COVER | 1 | |
| STEP 45 | MOL136100 | LEFT COVER | 1 | |
| STEP 46 | MOL136012 | MODEL LABEL REV.1 | 1 | |
| STEP 47 | MOL136110 | TOP COVER | 1 | |
| STEP 48 | SP3002812 | SCREW T6 3.0*12 BHD | 12 | |

CAUTION
DVA
DISCONTINUED
EQUIPMENT

NOTICE
KEEP
THIS LABELING
CLEAR